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THE HIGH RISK OCCUPATIONAL DISEASE NOTIFICATION AND PREVENTION ACT

SEPTEMBER 23 (legislative day, SEPTEMBER 22), 1987.—Ordered to be printed

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Mr. KENNEDY, from the Committee on Labor and Human Resources, submitted the following

REPORT

together with

MINORITY VIEWS

[To accompany S. 79]

The Committee on Labor and Human Resources, to which was referred the bill (S. 79) to notify workers who are at risk of occupational disease in order to establish a system for identifying and preventing illness and death of such workers, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill as amended do pass.

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I. Summary of the Bill

S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987, provides a low-cost mechanism for identifying, notifying, and monitoring workers whose health is at risk from exposure to hazardous substances in the workplace.

Identification and designation of at-risk worker populations to be notified is the responsibility of the Risk Assessment Board ("Board"), a 7-member panel of physicians and scientists appointed by the Secretary of Health and Human Services. The Board reviews existing medical and scientific data regarding the effects of hazardous occupational exposures and determines which specific classes or categories of workers should be notified that they are at risk. Notification is warranted only where there is statistically significant evidence that chronic health effects have occurred in persons exposed to the hazardous substance. The Board's first priority is to designate for notification employee populations likely to benefit from medical monitoring or health counseling.

After the Board reviews pertinent medical and scientific evidence regarding a particular occupational health hazard, it may issue a notice of proposed determination. This notice, specifying which classes or categories of employees are being considered for notification and why, is subject to public comment and hearing for a period of up to 150 days. The Board's final determination is subject to judicial review. In addition, employers who believe that, as a result of significant mitigating factors (such as engineering controls, work practices or health and safety programs), their employees should not be notified as members of the population at risk may apply to the National Institute for Occupational Safety and Health (NIOSH) for an exemption from notification. NIOSH must process this application on an expedited basis, and employees are not notified during the NIOSH review.

The Secretary of Health and Human Services is responsible for the notification of employees. Notification may be carried out by the federal government or by employers who wish to notify their own employees pursuant to standards set forth by the Secretary. If the federal government conducts the notification, NIOSH is the responsible federal agency. Notification is on an individual employee basis, but may be achieved through public service announcements or other similar means where individual notification is not reasonably possible. Notification must include an identification of the hazard and the disease or diseases associated with exposure, as well as information concerning any increased risk due to a combination of the occupational exposure and exposure to non-occupational factors. The notification must also include counseling information such as the advisability of initiating a personal medical monitoring program and a description of the most appropriate type or types of monitoring.

Medical monitoring is to be conducted at the local level through physicians or other medical or health professionals. Such monitoring involves examination for diagnostic purposes, not treatment. The costs of monitoring is borne by the employer if some part of the hazardous exposure occurred in the course of the employee's

current employment with that employer; otherwise, the cost is to be borne by the employee.

Other provisions in the bill prohibit discrimination against notified employees, preserve the confidentiality of records regarding the identity, diagnosis or treatment of individual employees who are at risk, and protect employees against loss of pay or benefits if it is medically determined that they should be removed to less hazardous work. The medical removal provisions do not apply to employers with 10 or fewer employees if those employers are attempting to reduce the exposure that is the subject of notification.

Finally, there are provisions expressly limiting or foreclosing the liability of employers or the federal government with respect to actions taken or findings made pursuant to the Act.

The bill authorizes $25 million in federal funds for each of the first 3 years following enactment. Of this amount, at least $4 million is set aside for research, training and education aimed at improving methods of identifying, monitoring and treating employees exposed to occupational health hazards.

II. Background and Need for Legislation

A. Introduction

Every day, millions of Americans are paid to produce products or to perform services. Certain occupations, such as firefighting, law enforcement and high rise construction, involve well-known safety risks. Burns, bullet wounds, falls, and similar acute injuries are evidence of these occupational safety risks.

But the working men and women of our country also face occupational health risks that may produce outcomes evident only after longer periods of time. An automotive repair instructor may develop the respiratory ailment called asbestosis long after his last employment as a brake mechanic. A manual laborer may show signs of lung cancer or kidney disease years after last working in a uranium mine. Over time, occupational health risks may lead to occupational diseases, including cancers, cardiovascular disorders, neurological impairments, and reproductive difficulties.

The present legislation aims to reduce the incidence and severity of occupational diseases by notifying workers of known occupational health risks and encouraging them to undertake appropriate medical monitoring and health counseling. S. 79 fills a critical gap in the nation's effort to provide for the health of its working people and reduce the suffering caused by occupational disease. Since Congress enacted the Occupational Safety and Health Act of 1970, progress has been made in regulating employee exposure to hazardous substances, agents or processes in the workplace. But the pace of regulatory hazard abatement inevitably lags behind our knowledge of workplace hazards. In addition, even where regulations have been promulgated and exposure levels reduced, large numbers or workers remain at risk due to past high levels of exposure. The Committee has concluded that the national detection and prevention program set forth in S. 79 is a necessary complement to earlier occupational health legislation. This secondary prevention approach, promoting positive medical intervention between the time

of exposure and the occurrence of a disease, can save thousands of lives and millions of dollars in health care costs.

In recent decades, valuable research on occupational disease has been performed. Epidemiological studies of populations of workers have found increased risk of disease associated with exposure to many toxic substances. Too often, however, the fruits of this research are not being directly applied to those at risk of disease. Currently, there is no adequate program furnishing risk information to workers so that they may protect themselves by seeking early detection and treatment of disease and counseling about contributing risk factors. The Occupational Safety and Health Act of 1970 provided for the conduct of research and studies on occupational disease. However, the provisions of the Act were not explicit about notifying individuals regarding findings of increased risk of disease associated with occupational exposure. Consequently, notification has not been undertaken. Efforts by the Department of Health and Human Services, and particularly the National Institute for Occupational Safety and Health (NIOSH), to come to grips with the issue have resulted in 15 years of conflicting policies and inaction.

Epidemiologists and industrial hygienists have developed accurate and reproducible methods for identifying and assessing health risks of groups of workers. Once identified, workers comprising the at-risk population can be notified and encouraged to enter a program of medical monitoring and health counseling. Existing medical techniques often can lead to the discovery of occupational related diseases in the earliest stages when treatment may be most effective, and in the successful management of disease after it has occurred. The Committee shares the view of health professionals that the combination of (i) medical monitoring with respect to the disease cited in the notification, (ii) health counseling to encourage changes in personal health habits and health care, and (iii) early detection of disease symptoms can be an effective means of preventing and controlling occupational disease.

B. MAGNITUDE OF THE OCCUPATIONAL DISEASE PROBLEM

Health hazards in the workplace may be physical, chemical, and/or biological in nature. Physical hazards may include ionizing radiation (as with uranium mining), and nonionizing radiation (as with radio transmitters). Chemical hazards may include organic substances (such as vinyl chloride used in the plastics industry) and inorganic substances (such as inorganic arsenic present in metal smelter operations). Biological hazards include viruses and other pathogens.

The relationship between workplace exposures and disease has been studied systematically since the early 1700's, when Bernardino Ramazzini wrote his "Treatise on the Diseases of Tradesmen." More recently, scientists have found that many workers in today's industrialized society have been and are being exposed to a wide range of toxic substances, agents, and processes at sufficiently high levels so as to increase the likelihood of death and disability. We know, for example, that there is an increased incidence of lung disorders following exposure to asbestos; an increased incidence of leu-

kemia among workers exposed to benzene; an increased incidence of neurological disorders among workers exposed to solvents; increased incidence of cancers of the bladder and urinary tract among workers exposed to certain dye chemicals; increased incidence of liver and brain cancer among workers exposed to vinyl chloride; and increased incidence of skin cancer among workers exposed to inorganic arsenic.

Even with our growing knowledge about specific occupationally related diseases, it remains difficult to gauge precisely the overall magnitude of the occupational disease problem. Records of occupational diseases often are less than complete for a number of reasons. First, many occupational diseases also may occur in persons not exposed to the workplace hazard and therefore may not be recognizably attributable to the workplace. Second, employees, employers, physicians and other health personnel may not be able to identify the occupational origins of the diseases; indeed, health professionals often are not trained even to consider occupational risk factors. Third, occupational diseases frequently do not manifest themselves until after a period of time, perhaps as long as 30 or 40 years after a change of occupation or after occupational exposure has ended. Finally, this country does not have an adequate national reporting system for occupational disease. Given the long latency period between occupational exposure and manifestation of the disease, and the failure routinely to link the two, the officially reported rates of occupational diseases are usually considered to be underestimates.

Despite these obstacles, rates of certain occupational diseases have been well-studied and are generally accepted, with accompanying declarations of the difficulties and limitations of the data. One study published in 1980 reported annual deaths from occupational diseases to number between 10,000 and 210,000.[1] The Department of Labor's Bureau of Labor Statistics reported 106,000 cases of occupational disease in 1982.[2]

A thorough study of the literature on cancer rates led the U.S. Office of Technology Assessment (OTA) to report that four to thirty-eight percent of *cancers* are associated with occupational exposures, but that the most acceptable range is between five and fifteen percent.[3] Using the National Cancer Institute's estimate of new cancer cases for both sexes in 1987,[4] and applying OTA's conclusions, new cancers in 1987 associated with occupational exposures range between 38,600 and 366,700 with the range fitting most estimates being between 48,250 and 144,750. Further, taking 1983 United States data on the number of cancer deaths for both sexes [5]

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[1] P.S. Barth, with H.A. Hunt, "Workers' Compensation and Work-Related Illnesses and Diseases." (MIT Press, 1980).

[2] "Occupational Injuries and Illnesses in the United States by Industry, 1982" (U.S. Department of Labor, Bureau of Labor Statistics, April, 1984).

[3] Office of Technology Assessment, "Assessment of Technologies for Determining Cancer Risks from the Environment" (Washington, D.C., June, 1981).

[4] American Cancer Society, "Ca-A Cancer Journal for Clinicians," vol. 37, no. 1 (Jan-Feb 1987), p. 12.

[5] U.S. Department of Commerce, "Statistical Abstract of the United States, 1987" (Washington, D.C., 1987) p. 75. The source for data on cancer deaths is the U.S. National Center for Health Statistics.

and applying OTA's figures, cancer deaths associated with occupational exposures in 1983 range from 17,720 to 168,340 with the range of most estimates being between 22,150 and 66,450.[6]

The most recent study of the magnitude of the occupational disease problem was conducted under the direction of Dr. Philip Landrigan, Director of the Division of Environmental and Occupational Medicine at Mt. Sinai School of Medicine in New York. Dr. Landrigan, who testified at the hearings on S. 79, analyzed 1986 data for the State of New York as part of a report commissioned by The New York State Legislature.[7] The Mt. Sinai report found that approximately 5,000–7,000 deaths occur each year in New York State as a result of occupational exposures. The same analysis estimated that 35,000 new cases of occupational disease arise each year in New York State.[8]

Estimated annual occupational disease deaths

Cancer	3,708
Pneumoconioses (dust diseases of the lung)	170
Chronic respiratory disease	41–123
Cardiovascular, renal and neurologic disorders	912–2,736
Total	4,831–6,737

The report concluded that this range of estimates was conservative, because the analysis considered deaths from only six conditions and also because "in each case, conservative proportional risk estimates were selected from the range of figures available". The report's concluding observation on the magnitude of the problem is worth quoting at length:

> It is important to consider these figures in the context of data on overall mortality. There are 167,000 deaths in New York State each year. The estimated 5,000–7,000 deaths attributable to work-related exposures constitute 3–4% of total deaths, making occupational disease the fourth most common cause of death in New York. Only heart disease, cancer and stroke cause more deaths each year than occupational disease. Every year, twice as many people die from work-associated diseases as die from homicide and suicide combined; 1.5 times as many people die from work-related conditions each year than have died from AIDS since that disease was first identified in 1981. Clearly, occupational disease is a major health issue.[9]

Extrapolating from the Mt. Sinai conclusions regarding occupational disease in New York, it is reasonable to estimate that be-

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[6] For a study estimating work-related cancers at the lower end of the OTA range, see R. Doll and R. Peto, "The Causes of Cancer: Quantitative Estimates of Avoidable Risks of Cancer in the United States Today," 66 J. Nat'l. Cancer Institute 1192 (1981) (estimating that only 4 percent of all cancers may be attributed to occupational exposure).

[7] P. Landrigan and S. Markowitz, "Occupational Disease in New York State: Proposal for a Statewide Network of Occupational Disease Diagnosis and Prevention Centers," (Report to the N.Y. State Legislature, Feb. 1987). Dr. Landrigan was Director of NIOSH's Division of Surveillance, Hazard Evaluations and Field Studies from 1979 to 1985. That division is the federal instrumentality primarily responsible for conducting epidemiologic fieldwork and developing ethical and scientific background materials on risk notification.

[8] See Landrigan and Markowitz, supra, pp. 7, 9, 15.

[9] Ibid, p. 9.

tween 62,000 and 87,000 deaths in the United States each year are attributable to hazardous occupational exposures.[10]

Apart from the incalculable costs of human misery, occupational disease exacts an enormous financial toll on both the private and public sectors of our economy. According to figures provided by the Congressional Research Service, occupational diseases cost the United States at least $7.1 to $9.7 billion in 1985. This includes between $500 million and $1.4 billion in medical costs, from $1.1 billion to $2.9 billion in forgone earnings, and $5.4 billion in costs to the federal government for various social services.[11]

The cost to the federal government is based on 1984 estimates by the Department of Labor that expenditures for victims of all occupational diseases totalled $2.2 billion for Social Security Disability Income, $800 million for Supplemental Security Income, $1.3 billion for Medicaid, and $1.1 billion for Medicare. The Committee assumes that the federal costs for 1985 would be no less than those given for 1984, the most recent year for which data are available.

Even these staggering estimates of the costs of occupational disease must be considered crude and partial. The figures do not include medical and wage-loss costs for workers whose occupational illnesses have not yet resulted in death. Also omitted are tax losses to the federal government from earnings forgone; State workers' compensation and unemployment insurance costs; and employer payments for sick leave, insurance premiums, and recruitment and training costs for replacement workers.

C. NOTIFICATION AND MEDICAL INTERVENTION

Medical intervention subsequent to exposure is effective for the treatment or alleviation of symptoms of many, although not all, occupational diseases. Dr. James A. Merchant, testifying before the Committee on behalf of the American Lung Association and the American Thoracic Society, stated "[t]he ability to alter adverse health outcomes of workers exposed to occupational health hazards depends in large part on early recognition and intervention." The American Lung Association since 1982 has issued detailed standards regarding medical surveillance for occupational respiratory disease. Dr. Merchant added that as part of employee notification, "[c]ounseling information should stress the importance for workers to enter medical surveillance programs".

Dr. John R. Seffrin, Vice President of the National Board of Directors of the American Cancer Society, testified that based on American Cancer Society estimates, over 165,000 Americans will die from cancer in 1987 just because their disease was detected too late. Applying OTA's conclusions as to the proportion of cancer

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[10] The national estimates are based on Bureau of Labor Statistics data indicating that New York in 1986 had 7.9 percent of the nonagricultural employees in the United States. The national estimate may well be conservative inasmuch as New York had a below-average proportion of all United States employees engaged in manufacturing (6.5 percent, mining (0.7 percent) and construction (6.3 percent—all areas where occupational disease is more frequently encountered.

[11] The Congressional Research Service estimates are based on an extensive analysis of the New York State report prepared by Dr. Landrigan, and also on Department of Labor estimates obtained from the Office of the Assistant Secretary of Labor for Policy. See M.J. Bolle, "Economics of Occupational Disease Notification and Prevention", (Mar. 24, 1987). The Medicaid and Medicare expenditures identified by the Department of Labor will duplicate in part some of the medical costs estimated on the basis of the New York State survey.

cases associated with occupational exposures, Dr. Seffrin's testimony suggests that between 8,000 and 25,000 occupational cancer deaths could be prevented this year through early detection and medical intervention. Dr. Seffrin concluded that early detection of cancer would be highly cost-effective, given that the disease ordinarily is treatable only in the early stages.

The following is a partial list of occupational diseases for which medical intervention is known to be effective:

Condition:	Form of treatment:
Lead poisoning	Chelation therapy and removal from exposure.
Mercury poisoning	Chelation therapy and removal from exposure.
Pesticide poisoning	Cessation of exposure; treatment with medications.
Silicosis	Reduction in exposure, smoking cessation, supportive pulmonary therapy.
Asbestosis	Reduction in exposure, smoking cessation, supportive pulmonary therapy.
Coalworkers' pneumoconiosis	Reduction in exposure, smoking cessation, supportive pulmonary therapy.
Cancer of the bladder	Cystoscopy, chemotherapy and early surgery.
Cancer of the skin	Removal in early surgery.
Cancer of the colon	Colonoscopy, removal in early surgery and chemotherapy.[1]

[1] See Supplemental Statement by Dr. Philip J. Landrigan, responding to written question from Senator Hatch (S. Hrg. 100-56, Pt. 1, p. 20); W.J. Cohn et. al., "Treatment of Chlordecone (Kepone) Toxicity with Cholestyramine," 298 N. Eng. J. Medicine 243-248 (Feb. 1978); J.M. Last ed., Maxcy-Rosenau Public Health and Preventive Medicine (11th ed., Appleton-Century-Crofts, 1980).

One issue raised at the hearings that relates to the benefits to be derived from medical intervention is the effect of cigarette smoking on occupational disease. Cigarette smoke is not itself an occupational health hazard. Because it is neither generated by nor integral to the work process, cigarette smoke cannot trigger notification under this legislation. In some instances, smoking cessation may be part of the total medical management of workers who have been exposed to occupational toxins. This is the case for virtually any of the occupational pulmonary diseases (such as silicosis, asbestosis, coalworkers' pneumoconiosis, or byssinosis), and also for occupationally-induced lung cancer. Cigarette smoking by itself does not cause any of these occupational diseases, but smoking may compound the occupational factors and aggravate the symptoms.

At the same time, it is futher evident from the record that many occupational diseases are entirely unrelated to smoking. Cessation of smoking may produce positive health consequences for individuals regardless of their occupation. But smoking cessation is of neither positive nor negative benefit in the medical management of such diseases as gastrointestinal cancer caused by wood dust; chronic encephalopathy from work with solvents; benzene-induced leukemia; lead poisoning; mercury poisoning; cadmium poisoning; anthrax, hepatitis and other infectious occupational diseases; peripheral neuropathy; and occupational dermatitis. In short, cigarette smoking is at most a contributing factor distinct from the burden of risk associated with occupational factors.

In this regard, the "Summary of Information Provided by CDC" contained in the "Additional Minority Views," is not an accurate reflection of the data provided by the Centers for Disease Control (CDC) regarding the comparative effectiveness of medical monitoring and smoking cessation in preventing occupational disease. An accurate summary of the CDC position is as follows:

SUMMARY OF INFORMATION PROVIDED BY CDC

	Hazard	Workers	Code [1]
1	Asbestos	4,000,000	3
2	Coal tar	78,764	3
3	4-nitrobiphenyl	([2])	5
4	Alpha-naphthylamine	2,132	5
5	4,4'-methylenebis	2,094	5
6	Methyl chloromethyl ether	([2])	3
7	3,3'-dichlorobenzidine	879	5
8	Bischloromethyl ether	11,400	3
9	Beta-naphthylamine	5,816	5
10	Benzidine	1,650	5
11	4-aminodiphenyl	([2])	5
12	Ethyleneimine	1,712	3
13	Beta-propiolactone	38	5
14	2-acetylamino-fluorene	896	5
15	4-bimethyaminoazo-benzene	1,453	5
16	N-nitrosodime-thylamine	7,815	1
17	Inorganic arsenic	660,000	5 and 3
18	Lead	800,000	3
19	Coke oven emissions	59,000	3
20	Cotton dust	559,700	3
21	1,2-dibromo-3-chloro-propane	3,231	4
22	Acrylonitrile	55,698	3 and 4
23	Ethylene oxide	107,450	0
24	Vinyl Chloride	29,836	1, 3, and 0
25	Carbon monoxide	1,997,559	4
26	Benzene	2,000,000	0
27	Beryllium	30,000	3
28	Cadmium	1,500,000	3
29	Chloroprene	43,712	3
30	Talc	527,523	3
31	Fibrous glass	200,000	3
32	Methyl butyl ketone	220,000	2
33	Polychlorinated biphenyls	12,000	2
34	Radon daughters	23,000	3
35	Silica	4,993,655	3
36	Formaldehyde	1,600,000	3
		19,537,013	

[1] The CDC explains its code as follows: "Rating: 0–5, with 5 the best. This is a subjective rating. The effectiveness of medical screening techniques is dependent on technological developments and should be evaluated periodically by a panel of experts."
[2] No estimate provided by CDC.

The CDC data demonstrate that medical monitoring was moderately to highly effective (rating of 3,4,5) for 30 of the 36 occupational health hazards, covering 89% of the over 19 million workers exposed. Because the "Additional Minority Views" omits the bulk of the CDC analysis, its conclusion that "the only real, effective, available method of secondary intervention to prevent occupational diseases is smoking cessation" does not fairly or adequately reflect the CDC data. The Committee has attached as an Appendix the entire CDC presentation, which rates the effectiveness of medical monitoring appropriate for specific hazardous exposures.

Notification of at-risk worker populations is likely to trigger beneficial health effects for at least two reasons. First, as discussed above, occupational fatalities and illnesses can be reduced through earlier disease detection and long-term monitoring. In this regard, notified workers may be expected to be at differing stages in the evolution of their occupational disease. While some workers may already have reached a point where medical intervention is unlikely to be effective, others will benefit from the unfortunate experience of the first group.

Notification also may lead to prevention and reduction of occupational disease because of greater precautions taken by both employers and employees. The Committee expects that employers will act to maintain a healthy work force. Once employers know that their employees are at risk, employers are obligated—morally if not legally—to pursue new engineering controls that reduce exposures, or to require the wearing of individual protective equipment that limits exposures. Further, employers in some instances are already required to replace the risk-creating agent, substance, or process with other agents, substances or processes that are less hazardous. In addition, notified employees may be expected to take a greater interest in protecting their own health, by encouraging their employers to adopt new procedures and by modifying their own lifestyle activities so as to reduce or eliminate contributing risk factors. Finally, notification will reinforce workplace health promotion activities (sponsored by employers, unions, or labor-management committees) that encourage better diets, exercise, stress reduction, and systematic health care.

In the last 10 years, a number of pilot notification programs have been initiated through the efforts of NIOSH, the National Cancer Institute, and worker organizations.

In 1981, a notification project in Augusta, Georgia identified 1,385 individuals who were at high risk of bladder cancer because of workplace exposure to the chemical, betanaphthylamine, during the period 1949 to 1972. NIOSH sent letters individually notifying workers of their risk status and encouraging them to obtain medical advice and to learn the warning signs of bladder cancer. NIOSH also established a medical screening program in collaboration with the local health department, community groups and a local medical college. The project was able to locate and notify 849 of 1,100 surviving workers, including over 200 who had moved and had to be tracked through a variety of means. Of those notified, 88% participated in the bladder cancer screening and education program. There were 15 confirmed cases of bladder cancer (5 detected through the screening program) plus 22 instances where screening results placed workers in a special risk category for future monitoring.[12]

In a second pilot program begun in early 1980, the National Cancer Institute funded a notification project by the Pattern Makers League of North America and the Worker's Institute for

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[12] Tillett, Ringen, Schulte, McDougall, Miller and Samuels, "Interventions in High-Risk Occupational Cohorts: A Cross-Sectional Demonstration Project," 28 Journal of Occupational Medicine 719, 725 (Aug. 1986) (cited hereinafter as *Tillett*); Schulte, Ringen, Altekruse, Gullen, Davidson, Anderson and Patton, "Notification of a Cohort of Workers at Risk of Bladder Cancer," 27 Journal of Occupational Medicine 19 (Jan. 1985).

Safety and Health after three independent studies indicated that pattern makers in the automobile and agricultural implement industries had a doubled risk of mortality from colon and rectal cancers. The project involved 12,000 active and retired workers employed in 700 different workplaces in 27 states and three Canadian provinces. Following labor-management negotiations, medical monitoring focused on colon and rectal cancers was provided by individual employers or by union-organized clinics paid for through employer/union insurance funds. Preliminary result from select locations indicate that only 48% of those notified participated in the screening program. The low rate is at least partly attributable to the severe unemployment problems that beset the auto industry during 1981 and 1982. Nonetheless, of 1513 participants who had completed the examination, there were 12 confirmed cases of colon or rectal cancer and 219 instances where colorectal polyps were detected warranting future medical screening.[13]

Another notification project, begun in 1978 in Port Allegany, Pennsylvania, identified individuals who were at high risk of lung cancer from exposures to asbestos while working at a glass and insulation products plant between 1964 and 1972. The project, funded primarily through a cooperative agreement between the company and the union, was administered by a nonprofit community organization with representation from the employer, the union, the medical community and the clergy. The project notified 854 of 1086 surviving workers, including 257 ho had moved away from the Port Allegany catchment area. Of those notified, 70 percent participated in the medical screening program. With a latency period of at least 20 years, the earliest cases of lung cancer are just beginning to be detected through the screening program.[14]

In addition to the three successful pilot programs, the federal government is in a position to expand significantly its notification efforts. NIOSH has the names and locations of some 250 work places in this country where as many as 250,000 current and former workers face increased risk of diseases such as cancer, lung disease, and other health problems because of exposures to a variety of toxic substances. The data was obtained by NIOSH from 66 mortality studies conducted over a period of years ending in January 1982.

In an expansion of that work, NIOSH identified three categories of workers who might be eligible for notification, even though it was not an aim of the NIOSH studies. The three categories are:

Group A (86 work sites, 110,005 workers):

> Studies in which participants could gain direct medical/health benefits from notification.

Group B (136 work sites, 137,967 workers):

> Studies in which participants are potentially at high risk and should be notified but there are no effective intervention methods.

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[13] Tillett, supra. at 720–725.

[14] Tillett, supra. at 720–725; Holstein, Deuschle, Bosch, Fischer, Rohl and Selikoff, "Port Allegany Asbestos Health Program: A Community Response to a Public Health Problem", 99 Public Health Reports 193 (March-April 1984).

Group C (27 work sites, 6,508 workers):

Studies in which individual participant notification would stimulate improvements in working conditions.

Since 1982, NIOSH has conducted 24 additional mortality studies, most of which would fall into one of these three categories.

In 1983, NIOSH drafted a proposal for a pilot worker notification project aimed at notifying some 25,000 workers of their particular risks of disease. The targets of the proposed program were:

8,000 workers at four locations in the beryllium industry who were found to have excess rates of lung cancer, heart disease, and nonmalignant respiratory disease;

10,000 chemical workers at six locations whose exposure to bis-chloromethyl ether placed them at excess risk of lung cancer;

2,300 workers at four locations who were explosed to benzidine and betanaphthylamine;

321 oil shale workers who showed a statistically significant risk of keratosis;

5,000 uranium miners and millers at 300 locations who were at increased risk of lung cancer and other diseases.

NIOSH submitted budget requests for conducting its proposed notification programs in fiscal years 1985, 1986, and 1987, but in each instance, the Administration rejected the requests.

In sum, the Committee has concluded that notification and medical monitoring capabilities already exist: what is needed is a commitment of federal resources to the notification effort. The Committee is mindful of the fact that S. 79 calls for a national program to locate and notify not only the subjects of particular studies, but also workers who are not themselves members of cohort populations that have been directly studied by Federal agencies. Although the task of notifying such workers will not be easy, the Committee is convinced that it can be accomplished with relative efficiency using modern computer-based techniques for data-handling and record linkage. In this regard, the Committee notes the testimony of Dr. Landrigan, recounting successful instances of cross-linkage between the computerized data base at NIOSH and commercial data bases such as the Dun and Bradstreet file, making it possible to identify individual firms with potentially hazardous exposures.[15] Subsequent interviews and field evaluations may be used in some instances to target appropriate worker populations for notification.

D. POTENTIAL COSTS OF A FEDERAL NOTIFICATION PROGRAM

1. Federal costs

The Committee received considerable testimony regarding the costs associated with implementing the prescribed notification program.

At the request of Senator Metzenbaum, the primary sponsor of S. 79, NIOSH prepared a detailed analysis of the federal costs involved in administering the program. That analysis was presented in the testimony of Assistant Secretary for Health, Dr. Robert E.

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[15] S. Hrg. 100-56, Pt. 1, pp. 13-14.

Windom.[16] The NIOSH analysis concludes that the total federal cost of administering the legislation, including notification of workers at risk plus funding for 10 occupational health centers, would be between $19.9 million and $26.5 million annually, depending upon how many employees are notified each year.

Notification costs are based on the NIOSH estimated average of $33 per employee. This includes the cost of locating potentially exposed workers, identifying workers actually at risk, and tracking down and notifying the identified individuals or groups. NIOSH assumed that the 10 health centers are to provide education, training and technical assistance to physicians and other health professionals, but are not to conduct medical monitoring except in rare instances. The other significant cost item identified by NIOSH is research and education to strengthen means of identifying at-risk employees and improve training in occupational medicine and health.

Federal Costs for Administering Notification Program

Activity	*Funds*
Risk Assessment Board	700,000
Employee notification:	
(100,000 workers)	3,300,000
(300,000 workers)	9,900,000
Telephone hotline	55,000
Dissemination of medical and health promotion material	250,000
Certification of private employers and State and local governments to notify workers	200,000
10 health centers:	
(funds to centers)	9,000,000
(HHS monitoring of centers)	250,000
Research	3,000,000
Medical and nursing school grants	1,000,000
Recordkeeping and enforcement	300,000
Annual report to Congress	100,000
Notification of subjects of Federal agency studies	500,000
Total	[1] 18,655,000–25,255,000

[1] The NIOSH figures submitted to the Committee were $19.9–$26.5 million. However, the research and education costs have been adjusted to reflect changes made by the Committee after NIOSH submitted its analysis. In the original bill, the research effort was specifically budgeted at $5 million, and the education effort was estimated by NIOSH at $200,000, for a total of $5.2 million. In the bill as reported, the research funding has been revised to $3 million and the education grant funding is set at $1 million, changing the total to $4 million.

Some concern has been expressed that the legislation will create a costly new federal bureacracy. The Committee concludes that this concern is without foundation. The legislation directs that the Secretary of HHS use NIOSH to conduct the actual notification effort, and the Committee expects NIOSH to build upon practices and procedures already in place. The Committee also expects that research and monitoring activities will be staffed from within existing HHS administrative units. The only new entity created—the 7 member Risk Assessment Board that determines whether a given worker population is at risk—is to be staffed by the Department of HHS, and can be made part of an existing administrative unit as well. Finally, the NIOSH cost analysis indicates that apart from the Risk Assessment Board members, only 50 full-time federal employ-

[16] See S. Hrg. 100-56, Pt. 1, pp. 100-112.

ees are needed to implement the legislation.[17] These 50 additional positions can be readily integrated into existing divisions or agencies of HHS without creating a new or costly bureacracy.

2. Employer costs

Apart from federal expenditures, the legislation imposes certain costs on employers. The principal costs identified during Committee consideration are the actual expense of medical monitoring, other expenses related to the conduct of medical monitoring, and costs associated with litigation arising out of the notification process.[18]

Under the legislation, employers may incur the cost of medical monitoring for those current employees who (i) are at risk of a particular occupational disease as a result of exposure to an occupational health hazard, and (ii) received some part of their exposure in the course of employment with their current employer. Employers are not responsible for medical monitoring costs with respect to their former employees (including retirees) or with respect to any current at-risk employees who were not exposed to the health hazard in question in the course of employment with the current employer.

Dr. Landrigan in his testimony estimated the costs of various occupationally-related medical monitoring procedures should such testing be required.[19]

Procedure	*Costs*
Medical examination by a physician	$100
Chest X-ray	45
Pulmonary function testing	38
Complete blood count	10
Serum chemistry screen	25
Urinalysis	6

If all of these tests are administered to 100,000 to 300,000 workers each year at a cost of $224 per employee, the total cost range would be between $22 million and $67 million.[20]

For several reasons, however, the cost to employers under this legislation will be considerably less than the estimated amount. Not every worker who is notified will choose to participate in a medical monitoring effort. The experience of the NIOSH pilot notification projects suggests that 70% participation among those notified is about average where extensive pre-planning and support systems are in place. In addition, the individual testing costs ignore

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[17] S. Hrg. 100-56, Pt. 1, p. 104. The NIOSH estimate of 67 full-time personnel includes the 7 Board members plus 10 research personnel now eliminated due to the reduced level of funding for research. See note 18, supra.

[18] There is also the cost of carrying out notification for employers who choose to operate their own notification programs under the supervision of the Department of Health and Human Services. This cost, however, is purely voluntary. In addition, the cost to employers of notifying their own current employees willl be negligible.

[19] S. Hrg. 100-56, Pt. 1, p. 15. The National Tooling and Machining Association (NTMA) testified regarding the cost of medical monitoring from an employer perspective. S. Hrg. 100-56, Pt. 1, p. 190. The NTMA estimate of $20-$250 per employee is generally in keeping with and in some instances lower than the estimate supplied by Dr. Landrigan.

[20] In many instances, not all of these tests will need to be performed; in other instances, additional tests will be required. See S. Hrg. 100-56, Pt. 1, p. 22. Some employees may need repeated medical monitoring in subsequent years. The expense, however, will be considerably smaller both because fewer employees will require medical follow-up and because the later monitoring need not be as comprehensive as initial tests.

economies of scale if large numbers of workers are screened at one time. Finally, given the Act's emphasis on notifying former as well as current employees, the Committee anticipates that notified workers will have to assume their own monitoring costs in many, perhaps even most, cases. In sum, the Committee believes that a reasonable estimate of medical monitoring costs to be borne by employers is between $7.4 million and $22.3 million, because only some one-third of the notified employees actually will receive monitoring at employer expense.

Additional employer costs related to medical monitoring may include transportation, lodging and food costs for workers required to travel to a medical monitoring site. These costs are estimated at $20 per employee by the National Tooling and Machining Association. The Committee expects that such costs will be infrequently incurred because employers generally will opt to provide medical monitoring either on-site or in the local community.[21]

The final potential cost to employers associated with the new legislation is the cost of additional liability claims that may arise from the notification process. A concern has been expressed that once employees are informed they are at risk of cancer or other serious diseases, anxious workers and their families will generate a tidal wave of compensation claims. Critics point to the experience of the Augusta, Georgia pilot notification project, where 171 current and former employees filed claims against the company seeking $335 million in damages.

The Committee emphatically intends that this preventive public health measure not create substantial new liability costs for employers. After careful consideration, the Committee believes that the proposed risk notification law will not produce such a result.

Taken as a whole, the experience of the pilot notification projects supports this view. In the Port Allegany, Pennsylvania project, a limited number of damages claims had been filed prior to the start of the program. Very few new claims have been filed as a result of the commencement of notification and medical monitoring. The national Patternmakers notification project also has resulted in few if any instances of litigation. These experiences suggest that conducting risk notification in a cooperative, supportive atmosphere can help minimize, if not eliminate, the prospect of attendant litigation. Even in the Augusta project, the company settled 120 of the 171 cases out of court for amounts totaling about $500,000, and the Georgia Supreme Court dismissed all the other suits on the grounds that workers' compensation was the exclusive remedy for

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[21] Another potential employer cost related to medical monitoring is the cost of medical transfer protection. If an at-risk employee is medically examined and evidence is found that the disease described in the notice is developing or other symptoms increasing the likelihood of the disease are occurring, the employee has the option of being transferred to a less hazardous or nonexposed job if a job is available for which the employee is qualified. If such a job is not available, the employer may be required to continue the employee's current wages and benefits for up to 12 months, subject to certain exceptions and limitations.

In theory, this 12-month rate retention provision could be a significant employer expense. In reality, however, the Committee does not expect the expense to be substantial because it will be unusual to find medical transfer warranted and even more unusual to find transfer warranted with no other job available. The medical transfer protection provision was patterned after requirements that have been in existence for many years under the Black Lung statute and under the OSHA standard governing exposure to lead. There has been no testimony or evidence to suggest that employers operating under these requirements have incurred any additional expenditures.

occupational disease claims. In any event, the volume and magnitude of the claims in Augusta may be attributable to certain unusual aspects of that situation.[22]

An additional basis for the Committee's conclusion that liability costs will not be substantial is the language of the legislation itself. Section 10(g) provides that an action taken pursuant to the Act may not serve as the basis for any claim for compensation, and that evidence of an action taken pursuant to the Act may not be admissible in any compensation proceeding. The meaning of section 10(g) is discussed in detail in the Committee Views below. The Committee emphasizes here, however, that once determinations of who is at risk and who has been notified are excluded from compensation proceedings, the prospect of new claims based on risk notification is significantly diminished.

Although the concern over employer liability has been expressed by a number of companies and trade associations, the Committee takes special note of the fact that the legislation also has impressive support from the business community. S. 79 has received explicit endorsements from the American Electronics Association, representing over 3,000 member companies; the Chemical Manufacturers Association, whose members produce 90 percent of the tonnage of chemicals generated in the United States; and the National Paint and Coatings Association, with over 1,000 member companies. Individual companies that have expressed support for the legislation include General Electric Company, IBM, Digital Equipment, W.R. Grace, Union Carbide, Eastman-Kodak Company, Ciba-Geigy Corporation, American Cyanimid Company, Rohm and Haas Company, the Atlantic Richfield Company, Occidental Petroleum Corporation, and the Crum and Forster Insurance Companies. These companies and associations have considerable experience with the potential liability consequences of hazardous workplace exposures. Their belief that S. 79 will not have substantial liability consequences confirms and strengthens the Committee's own views.

Further support derives from a recent report on the risk notification bill prepared by The General Accounting Office (GAO). The GAO finds no basis for concluding that the legislation will contribute to increased liability or litigation costs. Although recognizing the expressed concern that notified workers may bring more claims, the GAO concludes that "[e]ven if the bill is not enacted, an increase in lawsuits and claims might occur because workers are generally becoming more aware of their rights to compensation for health problems caused by workplace exposure to hazardous substances." [23]

It is true that notification will heighten public awareness of occupational diseases. But that is as it should be. The purpose of the legislation is to diminish the incidence and severity of such diseases by sharing knowledge and encouraging preventive health activities. Against this background, a refusal to tell workers that

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[22] Betanaphthylamine (BNA), the subject of the Augusta notification project, had been a suspected carcinogen as early as 1895 and a known carcinogen since the 1930's. The chemical had been banned in Switzerland and Great Britain by the 1950's. All American companies except the one in Augusta had previously discontinued production and use of BNA.

[23] United States General Accounting Office, "Worker Protection: Notifying Workers at Risk of Occupational Disease" (Washington, D.C. May, 1987) p. 13.

they should seek medical assistance to prevent a disabling disease for fear that they might bring a lawsuit would be simply unconscionable.

E. INADEQUACY OF CURRENT FEDERAL EFFORTS

The individual risk notification contemplated by this bill is not being performed under current law. During consideration of the bill, the Administration and some business representatives asserted that the Hazard Communication Standard promulgated by OSHA in 1983 provides ample information and protection for workers who are exposed to hazardous substances on the job. The Committee must respectfully but firmly take issue with that assertion.

The Hazard Communication Standard (HCS) became effective in November 1985 and May 1986. Under the standard, manufacturers and importers of hazardous chemicals are required to provide labels and material safety data sheets, informing users and their employers of certain hazards with regard to the specific chemical. The standard does not call for individual notification of employees. Rather, the material safety data sheets are to be available to employees for review at their place of employment, and are to provide information with regard to the make-up of the substance, its properties, the permissible exposure levels, the acute and chronic health effects, appropriate control measures and other data. Although the standard as originally promulgated covered only manufacturers and importers, OSHA recently was ordered by a Federal appellate court to extend coverage to all employers. In order to comply with the court's directive, OSHA has issued a new final standard which will apply to all sectors covered under OSHA by mid-1988.[24]

There are several important distinctions between the Hazard Communication Standard and S. 79. First and foremost is a fundamental difference in purpose. The HCS is a general hazard information system, designed to educate employees and workers to recognize hazards that are present in the workplace for the purpose of reducing exposures. Risk notification, by contrast, is an effort to warn particular categories of workers who are known to be at increased risk that past exposures threaten them with disease, and to provide the opportunity for appropriate medical surveillance. S. 79 thus warns individuals in a selected group that they themselves are at risk based on specified past exposures to a substance. In practical terms, a worker reading a material safety data sheet in an employer's office would learn about a chemical's potential safety and health hazards and appropriate measures to control on-the-job exposure. A worker receiving notice at home under S. 79 would learn about the extent of increased risk of a particular disease because of his or her own individual past exposure. The worker also would be advised about the most appropriate medical monitoring to reduce the risk of disease; the HCS provides no infor-

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[24] *United Steelworkers of America* v. *Pendergrass*, 819 F.2d 1263 (3d Cir. 1987). The Third Circuit concluded that OSHA had disregarded the Court's 1985 decision mandating expanded application of the HCS, and ordered OSHA to publish in the Federal Register within 60 days "a hazard communication standard applicable to all workers covered by the OSH Act." 819 F.2d at 1270. In its final rule, published in the Federal Register on Aug. 24, 1987, OSHA gave employers in non-manufacturing sectors 9 months—until May 24, 1988—to be in compliance with the HCS.

mation on appropriate medical monitoring and makes no provision for medical monitoring to be offered.

The difference in approach between the two programs leads to important differences in the scope of coverage. The HCS applies to all employees who have any potential exposure to a workplace hazard; in its expanded form, it covers some 32 million workers. Unlike the HCS, S. 79 involves an effort to deal with narrowly defined categories of workers—numbering in the thousands, not millions—who are known to be at increased risk of disease. One the other hand, even in its recently expanded version, the HCS's failure to protect former employees and employees formerly exposed to toxic substances is significant from a public health standpoint. Hundreds of thousands of Americans are known to be at risk from having been exposured to occupational health hazards before their retired, were laid off, became disabled, or simply took a new job. Others may still be employed by the same employer but no longer are exposed to the hazardous agents, substances or processes that put them at increased risk of disease. Given the long latency periods for most occupational diseases, these men and women could benefit from the notification and advice on medical monitoring provided under S. 79.

A final critical distinction is that under the proposed legislation, the federal government is primarily responsible for conducting risk notification. The HCS, however, is administered primarily by employers. Indeed, one difficulty with the standard is that its primary source of information, the material safety data sheet, is prepared individually by each manufacturer or importer of the chemical. Although it is unlikely there would be a deliberate effort to exclude certain data, it is clear from preliminary studies that there are substantial discrepancies in hazard information available to workers.[25] OSHA's apparent difficulties in monitoring employer compliance with the HCS may be resolved over time. But the Committee is persuaded that in the complex area of risk notification, where the lives and health of already exposed workers are at stake, the preferred approach is to have the federal government actually implement the program. The Committee believes that the program should be administered through NIOSH and the Department of HHS rather than through OSHA and the Department of Labor because NIOSH has valuable experience in conducting employee notification programs as well as a strong base of knowledge about occupational disease.

In sum, the Committee concludes that S. 79 complements the OSHA Hazard Communication Standard. Educating all workers to recognize and understand workplace hazards does not take the

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[25] The California Occupational Safety and Health Administration reviewed some 20,000 material safety data sheets prior to the effective date of the federal standard and discovered that 75 percent contained errors. A significant proportion of those errors were failures by preparers to include data with regard to chronic health dangers. See Letter from Frank R. Ciofalo, Deputy Chief for Health to Sy Holzman, Deputy Staff Director, House Subcommittee on Health and Safety, May 6, 1986 (together with attachments). More recently, speakers at an American Chemical Society meeting in New York City noted the wide disparity between safety data sheets from different preparers for the same substance. Known carcinogens were cited on some sheets but not on others. Bureau of National Affairs, Occupational Safety and Health Reporter, vol. 15, no. 46 (Apr. 24, 1986) p. 1166. It is doubtful that OSHA has adequate numbers of skilled persons to review every material safety data sheet prepared. And unless the error is truly glaring, field inspection personnel are unlikely to know how accurate the material safety data sheet is.

place of a notification program aimed at encouraging medical surveillance that will save the lives of thousands of employees known to be at increased risk of disease.

III. History of S. 79

S. 79, a bill to notify workers who are at risk of occupational disease in order to establish a system for identifying and preventing illness and death of such workers, and for other purposes, was introduced by Senators Metzenbaum and Stafford on January 6, 1987 and was referred to the Committee on Labor and Human Resources. The bill was referred by the Chairman to the Subcommittee on Labor. Subsequently, Senators Metzenbaum, Stafford and Durenberger offered an amendment in the nature of a substitute for the original bill. The substitute amendment, with additional amendments, was accepted by the Subcommittee on Labor on April 28, 1987. The amended Metzenbaum-Stafford-Durenberger substitute was then discussed in the full Committee. This substitute amendment, with further amendments, was accepted by the Committee on Labor and Human Resources on July 23, 1987.

IV. Hearings

Public hearings were conducted by the Subcommittee on Labor on February 24 and March 9, 1987, in Washington, D.C. The following individuals provided testimony:

FEBRUARY 24, 1987

Dr. Philip J. Landrigan, President; representing the Association of University Programs in Occupational Health and Safety;

Dr. John Seffrin, representing the American Cancer Society;

Dr. James A. Merchant, representing the American Lung Association/American Thoracic Society;

Dr. Robert Windom, Assistant Secretary, representing the Department of Healh and Human Services, accompanied by Dr. J. Donald Millar, Director of the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, and by Dr. James Melius, Director of NIOSH's Division of Surveillance, Hazard Evaluations and Field Studies;

Howard D. Samuel, President, representing the Industrial Union Department, ALF–CIO, accompanied by David Mallino, Legislative Director of the Industrial Union Department;

Margaret Seminario, Assoicate Director, Department of Occupational Safety, Health, and Social Security, AFL–CIO, summarizing the written testimony of Michael J. Wright, Director of Safety and Health, United Steelworkers of America;

Robert Watson, Recording Secretary, on behalf of USWA Local 1066, Gary, Indiana;

George Cafasso, Chairman, Safety and Health Committee, on behalf of USWA Local 1557, Clairton, Pennyslvania;

Robert E. Finnigan, on behalf of the American Electronics Association;

Leslie Cheek, Senior Vice President of Federal Affairs, on behalf of Crum and Foster Insurance Companies;

Robert Clark, on behalf of the National Tooling and Machining Association;

Tom Evans, on behalf of the National Association of Manufacturers.

MARCH 9, 1987

Edward J. Burger, Jr., M.D., Sc.D., director; representing the Institute for Health Policy Analysis, Georgetown University Medical Center, accompanied by John Higgenson, M.D., Director, Unit of Advanced Studies;

Frederick Hoerger, M.D.; representing the American Industrial Health Council, accompanied by Martin Reape, Ph.D., Chair; Epidemiology Committee of the American Industrial Health Council;

Eugene Humphrey, President; Humphrey Chemical Co., on behalf of the Synthetic Organic Chemical Manufacturers Association, Inc.;

James F. Patterson, President; Ohio Farm Bureau on behalf of the American Farm Bureau Federation;

Wallace Parker, Chairman; representing the Health and Safety Committee of the Associated General Contractors;

T. Peter Ruane, Chairman, Treasurer; representing the Small Business Legislative Council;

John A. Knebel, President; representing the American Mining Congress, accompanied by Bernard Roy;

Earl Arp, Director of Health and Safety, Ashland Oil Company; representing the American Petroleum Institute, accompanied by Gerry Raabe, Manager; Epidemiology and Medical Information Studies at Mobil Oil;

George A. Rodenhausen, Director; Environmental Health and Safety Affairs of the Celanese Corporation on behalf of the Chemical Manufacturers' Association, accompanied by Bruce W. Karrh, M.D., Vice President for Safety, Health and Environmental Affairs, E.I. duPont de Nemours and Company;

Craig Berrington, General Counsel; representing the American Insurance Association.

Allyn Tatum, Arkansas Commissioner for Workers' Compensation; on behalf of the International Association of Industrial Accident Boards and Commissions.

V. Committee Views

This legislation provides for the identification, notification and medical monitoring of workers whose health is at risk from exposure to hazardous substances, agents or processes in the workplace. The Risk Assessment Board is responsible for identifying populations at risk, NIOSH is primarily responsible for notifying those identified, and local medical and health professionals are expected to perform most of the medical monitoring. All three elements must be successfully integrated in order to achieve the legislative goal: minimizing the incidence and severity of occupational disease among workers already exposed to workplace health hazards.

DEFINITIONS

The definition of "employee" includes both individuals currently employed and former employees for whom a federal agency maintains work history records or a former employer maintains personnel or medical records or records of workplace exposure to hazardous substances. The Committee intends that notification and medical monitoring be made available to as many at-risk individuals as can be located. Accordingly, the definition of "former employee" is based on the existence of relevant identifying records. The Committee is aware that the OSH Act and other federal and state laws require extensive employer recordkeeping and records retention. This legislation does not impose or contemplate new recordkeeping requirements (except for records necessary to monitor the number, types and results of notification).

The "medical monitoring" called for under the Act is intended to be diagnostic in nature. The Risk Assessment Board is responsible for determining the appropriate medical monitoring (including health counseling) for a disease that has been the subject of a notification. The obligation of the physician or other health professional during monitoring presumes counseling activity for the explanation and interpretation of test results. Such counseling should include discussion and education, as appropriate, related to risk reduction through lifestyle changes (e.g., diet, exercise, smoking) or changes in work practices (e.g. proper use of personal protection equipment).

The definition of "occupational health hazard" is broadly framed in order that the Board may consider a wide range of chronic health effects from occupational exposures. Although the finding of such a hazard does not, in itself, trigger employer responsibilities under the Act, other applicable law may require the employer to take corrective action.

The definition includes, in addition to "a chemical, a physical or a biological agent," an "industrial or commercial process" for which there is statistically significant evidence that chronic health effects have occurred among exposed employees. Particular processes can be and have been isolated as posing discrete identifiable risks, even though the precise agents which create the risk cannot always be identified. As explained by the National Toxicology Program (NTP), while most carcinogens can be "identified chemically," there are some instances in which "only the exposure associated with a specific technological or manufacturing process, occupation or industry * * * can be related to an increased incidence of cancer in humans." [26] For example, an excess of colon cancer has been found in pattern and model makers in the auto industry. Despite extensive industrial hygiene assessments, a specific agent to which excess risk can be attributed has not been identified. Further, OSHA has adopted regulations focusing on particular industrial processes where, as in the case of exposure to coke oven emis-

[26] U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, Fourth Annual Report on Carcinogens (1985) p. 8.

sions, "no one substance can confidently be selected * * * as the substance to be regulated." [27]

By including industrial or commercial processes, the Committee does not mean to suggest that work processes resulting in mere physical discomfort (e.g. sitting in an office chair for 10 hours) may constitute an occupational health hazard. The Committee is confident that the Risk Assessment Board can make the necessary judgments in this regard.

The definition specifically excludes potentially harmful agents that may be present in the workplace but are not "* * * generated by or integral to the work process." This exclusion is intended to cover agents to which workers may be exposed as a result of their own or other individuals' lifestyle choices. As discussed above, the Committee carefully considered the relationship between cigarette smoking and occupational disease. The Committee concluded that smoking itself is extrinsic to the work process, and therefore different in kind from the occupationally generated hazards that are the focus of the legislation. Accordingly, the definition precludes the Risk Assessment Board from finding that either active or passive smoking is an occupational health hazard.

Some of the individual elements listed in the definition might arguably include acute health effects as well. The definition, however, specifies that the identification of an occupational health hazard must turn on the finding of chronic effects in exposed employees, and the Committee does not intend that acute effects be considered by the Board.

Based on its review of clinical and epidemiological evidence regarding occupational health hazards, and pursuant to procedures discussed below, the Risk Assessment Board will designate specific "populations at risk of disease" to be notified. In designating such populations, the Board is required to base its determinations on established scientific principles. In particular, the Board must find statistically significant evidence that the occurrence of a specific disease is associated with human exposure to a hazardous substance, agent or process.

The Board designation of a population at risk should include both groups of employees among whom chronic health effects were found to have occurred based on clinical or epidemiological study ("studied subjects") and also groups of employees exposed to the same occupational health hazard under working conditions comparable to those experienced by the studied subjects. The Board must establish comparability of working conditions before including for notification a group of workers other than the studied subjects.

Comparable working conditions should be defined as precisely as possible in order to facilitate the notification process. In determining whether comparable working conditions exist among different worker populations, information on concentrations of exposure, or durations of exposure, or both, will be extremely useful. The Committee understands that specific information on levels or durations

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[27] 41 Federal Register 46,742, 46,745 (October 22, 1976). The preamble to the OSHA standard continues: the coke oven emissions standard "*applies to workplaces using the process of* destructive distillation or carbonization of coal for the production of coke." id., at 46,752 (emphasis added).

of exposure to a particular substance are not always available for studied subjects, and that even if the information is available there may be no similarly specific information for worker populations to whom the studied subjects are being compared. In such circumstances, it may be necessary to rely on other factors (e.g., length of employment and detailed description of job functions or work processes) to evaluate the comparability of working conditions. The Committee expects, however, that information on both concentrations of exposure and durations of exposure will be used to the extent such information is available in defining the population at risk of disease that is to be notified.

RISK ASSESSMENT BOARD

The legislation creates a 7-member Risk Assessment Board, composed of scientific and medical specialists from within the Public Health Service and outside of the federal government. Board members are appointed by the Secretary of HHS from lists of nominees provided by the National Academy of Sciences. The Committee expects that the Academy lists will consist of specialists for each position who have achieved high levels of recognition from their peers. The Board will be staffed from within the Department of HHS and will report to the Secretary through the Director of NIOSH.

While the Risk Assessment Board must maintain a close working relationship with NIOSH, the Committee intends the Board to exercise independent medical and scientific judgement in carrying out its responsibilities. The Committee has concluded upon careful reflection that the Board's findings should not require further administrative review within HHS. The Board's structure is designed to create a scientific peer-review system as part of ongoing operations. The Board's mandate is to derive decisions from recent scientific data that defines populations at risk at a reasonably high level of certainty. The appointment of professionally qualified individuals as Board members is designed to insure that the Board obtains and objectively reviews the best available scientific information. In short, unlike other instances where Congress gives a Secretary or agency director responsibility for carrying out particular programs and a panel or board is created to implement that responsibility, the Committee has given the Risk Assessment Board strict guidance as to its role through the specifics of the legislation. Inasmuch as the Secretary is not given the responsibility of policy formation for the Board, there is no reason to provide the Secretary with a final review of any notification that the Board determines to be necessary.

The legislation assigns the following responsibilities to the Board: (1) review relevant medical and scientific data concerning the incidence of occupational disease; (2) identify and designate populations at risk of disease that should receive notification pursuant to the Act; (3) determine the appropriate type(s) of medical monitoring for each occupational disease that is the subject of a notification; and (4) develop a form and method of notification for the population(s) identified. In identifying and designating populations at risk of disease, the Board must consider certain specified factors based on the best available scientific evidence. Although consider-

ation of these factors is intended to insure the use of sound scientific methods, the Committee recognizes that scientific evidence may not always be available on each of the factors listed. Accordingly, the Committee does not intend the availability of scientific evidence on each listed factor to be a prerequisite for identifying and designating a population at risk. The Committee does intend that such factors should be considered based upon the scientific evidence that is available.

In designating populations at risk of disease who are to be notified, the Board's first priority is to select populations likely to benefit from medical monitoring. Recent developments in medical ethics support the principle that individuals should be informed whenever there is reasonable certainty of risk, as determined by scientifically creditable sources. The Committee endorses this ethical approach, but at the same time believes that the Board must have priorities for the use of its limited resources. By focusing on the possible health benefits to be derived from medical intervention or counseling, the Board's action will conform to the public health objectives of the legislation.

The Board is to notify as many employees at risk of disease as the annual appropriated funds and the best available scientific evidence permit. The Committee notes in this regard the conclusion by NIOSH that from a fiscal standpoint up to 300,000 individuals can be notified each year under the $25 million budget contained in the bill.

Board procedures are designed to provide the scientific data and industrial or commercial workplace information needed for the task of identifying and describing a "class or category of employees" to be notified. The process begins with Board publication in the Federal Register of an agenda of agents or processes that the Board is evaluating for potential notification over the next 6 months. This advance notice of the Board's possible agenda allows interested parties an early opportunity to collect and organize relevant information for the Board to consider.

Once the Board decides to move forward on a particular occupational health hazard, it must publish in the Federal Register a notice decribing the classes or categories of employees it proposes to consider as a population at risk, and the basis relied upon to support the proposed finding. The public may then offer written comments on the proposed finding, and interested parties may express their views at a public hearing conducted by the Board. Representatives of employees, employers, and the public health community are encouraged to assist the Board in refining its description of what classes or categories of workers should be included as part of a population at risk. For example, individual employers and unions may be able to supply important information about specific industrial workplace practices or exposures in particular operations or job classifications.

Following the period for public hearing and comment—not to exceed 105 days in most circumstances—the Board must issue its final determination, which is deemed final agency action for purposes of judicial review. Because S. 79 is intended to warn employees about life-threatening or health-threatening risks, the timeliness of notification is critically important. The Committee believes

that Board action should be completed as expeditiously as possible, consistent with the need to assure that all interested parties have an opportunity to be heard.

Judicial review of final Board determinations is in the United States Courts of Appeals. A court may review Board determinations as to what is or is not an occupational health hazard; what class or category of employees is designated a population at risk; and what constitutes appropriate medical monitoring for the designated population at risk. The Committee intends that the grounds for judicial review set forth in the legislation be construed as coextensive with the corresponding provisions of the Administrative Procedure Act, 5 U.S.C. 706(2) (A) through (E). The judicial review provision includes an unusually high standard that must be met in order to stay notification pending judicial review. This reflects the Committee's concern for the urgency of the health issues that may be involved in particular cases.

The Board is required to review new scientific data at least every 5 years following a final determination in order to assess the continued appropriateness of the notice previously issued and the medical monitoring previously recommended. Although the Board is not required to initiate any formal procedures as part of this review, the Board's assessment will be made available to the public. The Committee expects the Board to reopen the record if it finds that either the notice or the medical monitoring is inappropriate. When determining what medical monitoring is appropriate for a given occupational health hazard (initially as well as on periodic review), cost is a relevant consideration between two or more procedures only if the procedures are equally effective.

NOTIFICATION PROCESS

The Secretary, through NIOSH, is responsible for notifying the classes or categories of workers designated by the Board. This may include employees currently exposed to the relevant occupational health hazard and also employees exposed up to 30 years prior to the date of notification, provided that they fall within the population as defined by the Board. The 30-year period for employees formerly exposed reflects the Committee's belief that given the long latency periods for many occupational diseases, notification and medical monitoring may be vitally important even decades after exposure.

The Secretary is directed to make every reasonable effort to notify each employee within the designated population at risk. The Committee expects that notification will be transmitted on an individual basis whenever reasonably possible. In some instances, individual notification may be impracticable for some or all of the affected employees, due to the difficulty of locating workers formerly exposed or identifying individual at-risk employees in an industry with tens of thousands of employers. Where NIOSH determines that individaul notification is not reasonably possible, it may use public service announcements and other means of communication calculated to reach the population at risk.

The notification is to include specific information concerning the nature of the occupational health hazard, the disease or diseases

associated with exposure, and known latency periods, the extent of the risk when compared to the population at large, any nonoccupational factors that are known to increase the risk of contracting the disease(s), and the most appropriate type or types of medical monitoring that should be initiated. Notification also must include certain more generally applicable information regarding employer responsibilities to notified employees, the name and address of a nearby occupational health center certified under the Act, and the telephone number of a NIOSH toll-free hotline that can provide additional medical and scientific information. The Board is to develop the form of notification for each population at risk, incorporating the elements described above.

In order to carry out notification responsibilities assigned under the Act, the Secretary is given access to records maintained by federal agencies or States and their political subdivisions for the purposes of obtaining, names, addresses and work histories. The term "work histories" refers to records of where an employee is working or has worked and for how long, the type(s) of work done and for how long, the employee's exposures to occupational health hazards, and the employee's medical records. The Secretary also has access to records maintained by employers pursuant to the Occupational Safety and Health Act, the Mine Safety and Health Act, or other federal or state laws concerning occupational safety and health matters. All access to records is expressly conditioned upon compliance with the federal Privacy Act, 5 U.S.C. 552a.

In carrying out notification responsibilities, the Secretary is encouraged to cooperate with private employers and with State and local governments. Such cooperation will benefit employers as well as the Secretary, by enabling the Secretary to collect the most accurate possible information concerning which employees fall within the class or category designated by the Board. The Committee intends that any refusal to cooperate by an employer should be considered by a reviewing court or agency if that employer subsequently challenges the accuracy or completeness of a specific notification effort.

The Secertary may certify private employers or State or local governments that themselves wish to notify populations at risk. The Committee encourages such nonfederal initiatives, which are subject to certain federal requirements, and the Committee expects the Secretary to work cooperatively with employers that seek certification. Nonfederal notifications may be carried out only pursuant to regulations developed by the Secretary. Private employers and state or local governments may not be reimbursed by the federal government for the cost of such notifications. And while private employers and state and local governments may seek access to federal agency records, they do not enjoy the same right of access of federal records that the legislation grants to the Secretary.

NIOSH's responsibilities under the notification process include the authority to grant an individual employer's application for a "variance" that would exempt the employer's employees from being notified even after a Board determination that the employees were members of a population at risk. The Committee recognizes that particularly in decentralized industries with thousands or tens of thousands of small employers, the Board may lack the expertise

or resources to consider every variation in workplace conditions. Yet there may be instances in which a particular engineering control, process design, or other workplace-specific factor radically alters the hazardous occupational exposure but was not considered by the Board in formulating the class or category of workers to be notified. NIOSH is therefore charged with reviewing individual employers' contentions that their employees are not at risk because of factors present in their workplace that are fundamentally different from the factors relied upon by the Board and that substantially eliminate the risk of developing the occupational disease in question.

The procedure for seeking an exemption is intended to be prompt and discrete from other procedures under the Act. Interested employers must apply to NIOSH for an exemption within 30 days after the Board issue its final determination designating a population at risk. NIOSH must first decide whether an application (which may include detained supporting documentation) raises an issue of material fact that is subject to reasonable dispute. The Committee intends that NIOSH be guided by the standards for determining the presence of material factual disputes under Rule 56 of the Federal Rules of Civil Procedure. If the application does raise an issue or issues of material fact, NIOSH is to publish a notice in the Federal Register and schedule a hearing on the disputed issues. All applications with respect to a particular population at risk must be consolidated in a single hearing. The Secretary may not notify employees of an applicant employer during the pendency of the application. NIOSH must issue a decision granting or denying the application within 30 days after receipt of the application). A decision granting an exemption covers only the employer or employers who actually applied for the exemption. Employers appearing before NIOSH may not challenge any aspect of the determination made by the Board (although they may, of course, challenge the Board's determination through the judicial review process).

The employer carries the burden of proof in the application procedure. The employer must demonstrate by a preponderance of the evidence that because of significant mitigating factors present in the workplace—factors fundamentally different from those relied upon by the Board—particular employees or groups of employees who are members of the designated population have had their risks substantially eliminated. "Significant mitigating factors" may include, but are not intended to be limited to, those mentioned in the legislation. By "substantially eliminate" a risk, the Committee intends that the risk of contracting the disease in question has been reduced essentially to (or found to be at) the level of the population at large.

TECHNICAL ASSISTANCE, RESEARCH AND EDUCATION

Notification will not help save lives or improve health without appropriate medical follow-up. While the Committee intends that physicians and other health professionals at the local community level will be primarily responsible for medical monitoring, addi-

tional support services are needed to ensure that such monitoring is timely and effective.

The legislation provides for the establishment of 10 health centers to offer training and technical assistance to physicians and other professionals monitoring the health of notified workers. The Committee expects the 10 centers to operate programs at their current locations and to reach out to local communities where designated populations reside. Apart from their primary role of providing training and technical assistance, the centers should be capable of monitoring and treating populations at risk in the event that adequate facilities are not otherwise reasonably available. Employers required to provide medial monitoring may at their option contract with a nearby health center to conduct monitoring activities.

The Committee expects the Secretary to select the 10 health centers from among the 15 Education Resource Centers funded by NIOSH (many of which have a proven track record in research and medical monitoring related to occupational disease); the more than 50 occupational health clinics across the country that are associated with a medical school or teaching hospital; centers funded through the National Institute of Environmental Health Sciences or the National Cancer Institute; and other facilities operated with public or private funds. Selection is to be based on experience and ability in diagnosing and treating occupational disease and in training physicians, nurses and other prfessionals, and also on geographical proximity to designated populations.

The legislation authorizes NIOSH to conduct research or award research grants to the health centers, schools of public health, or other government-funded institutions. The research is aimed at improving the means of identifying employees exposed to occupational health hazards and also at improving the medical assistance offered to such employees.

Special provision has been made to award at least $1 million in grants and contracts for training and curriculum development in medical schools and schools of nursing. The Committee has added the grants program to the existing health professions training title of the Public Health Service Act, in order to stimulate change in the medical education system with respect to occupational health. A recent and often-cited survey reports that during the 1982–83 academic year, only 54 percent of U.S. medical schools required that any class time be devoted to occupational health, and the median number of classroom hours devoted to the subject even in those schools was a mere four hours.[28] The American College of Physicians has concluded that "the content of occupational medicine, as it relates to the practicing physicians, is seldom considered in the education and training of physicians." [29] The Committee believes that occupational medicine and occupational nursing are health manpower disciplines of national need, and that the number of health specialists trained in this field should be increased. The Committee further believes that physicians and nurses who are pri-

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[28] B. Levy, "The Teaching of Occupational Health in United States Medical Schools: Five Year Follow-Up of an Initial Survey," 75 American Journal of Public Health 79 (January, 1985).

[29] American College of Physicians, "The Role of the Internist in Occupational Medicine," (Position Paper, Washington, D.C., September, 1984).

mary care providers must become more aware of the importance of routinely eliciting and recording information about their patients' occupational exposures. Informed opinion demonstrates that such improvements may best be achieved through an incentive grants program, with emphasis on providing funds for the development of faculty trained to provide instruction in occupational medicine and nursing, and on training for medical residents and graduate nursing students.

Grants of two types may be awarded. Schools of medicine or nursing in which occupational medicine or health programs already exist on the date of enactment may receive federal funds for one or more of three objectives: to provide continuing education for faculty; to develop, publish and disseminate relevant curricular materials; or to establish graduate training placements at medical facilities, union offices, industrial worksites or similar settings. The term "occupational medicine programs" is intended to cover programs meeting the qualifications listed for training programs in occupational medicine at schools of medicine under the "Essentials of Accredited Residencies" section in the 1986–1987 edition (or most recent edition) of the Directory of Residency Training Programs (as accredited by the Accreditation Council for Graduate Medical Education). The term "occupational health programs" is intended to cover those graduate nursing programs that have been accredited by a nationally recognized nursing organization as eligible to provide graduate education in occupational health nursing. The Committee intends that funds provided through grants made under this section may be made available for resident or graduate nursing stipends during the graduate training placements.

Grants also may be awarded for faculty training in occupational medicine or nursing at institutions where programs in occupational medicine or nursing do not currently exist. The funds are intended to be used to cover the costs of training such faculty at an institution with an existing accredited program in occupational medicine or nursing. Once such faculty have completed their training, they should possess the necessary skills and requirements to begin instruction at their home institutions. The Committee expects that faculty who leave their home institutions to engage in occupational health training will be granted assurance of a position in their home institution upon completion of the training. The Committee further expects that faculty members trained in occupational medicine or nursing will return to their home sites to expand and enhance the presence of occupational health in the medicine or nursing curriculum.

The Secretary is directed to make grants and contracts of either type described above to a total of at least 10 schools of medicine or shcools of nursing by September 30, 1990. The Committee intends that grants and contracts may be awarded for periods of more than one year.

PROTECTIONS FOR NOTIFIED POPULATIONS

Unless an employer requests certification to conduct a notification, its principal financial responsibility under the Act is the cost of providing medical monitoring recommended by the Board to a

current employee in a notified group, who was exposed to the health hazard in question during the course of employment with that employer, and who asks to participate in a monitoring program.[30] Under these circumstances, an employer must pay the entire monitoring cost for uninsured employees, but the employee may be required to meet generally applicable deductibles or copayments if the monitoring is available through an existing employer health plan. This arrangement is intended as an incentive for employers to seek health insurance coverage of such medical monitoring. Although notified employees are strongly encouraged to initiate medical monitoring as recommended by the Board, the decision whether to participate in monitoring under the Act is entirely at the employee's discretion. The only exception is that an employer may condition certain protections relating to medical transfer (discussed below) on the employee's participation in continued medical monitoring.

The Committee intends that where an employer is required to provide medical monitoring, the means of providing it be left to the employer's judgment consistent with sound medical practices. Employers may choose to secure appropriate coverage from health insurance carriers or they may enter into contractual agreements with health maintenance organizations, clinics, hospitals, or testing laboratories. Some employers may choose to create or expand in-house medical programs. Nothing in the Act, however, should be construed to require that an insurance carrier, an HMO, or any other health institution provide medical monitoring services.

Following medical monitoring, there may be evidence that the disease described in the notice is developing, or the employee may exhibit symptoms or conditions making the disease more likely to progress or occur. The Committee believes that once there is actual evidence that an individual employee's health is endangered, the employee should not be forced to choose between remaining healthy and remaining employed. Accordingly, the legislation provides for a procedure whereby such employees may seek a medical transfer to a less hazardous or nonexposed job without loss of earnings or other employment rights and benefits. But because the Committee also is sensitive to the potential burdens on employers of such a medical transfer provision, the legislation specifies certain limiting conditions.

An employer is required to provide medical transfer protection only if some part of the employee's exposure to the occupational health hazard occurred during employment with that employer, and only if the employee is in a notified group. The employer may not be required to displace any other employee or to violate the terms of an applicable collective bargaining agreement. The transfer may be conditioned upon the employee having the qualifications necessary for the less hazardous or nonexposed job in question. Once the transfer is made, the employee may be required to participate in follow-up medical monitoring to determine whether

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[30] As discussed earlier, employers are not responsible for medical monitoring costs with respect to their former employees (including retirees) or with respect to any current at-risk employees who were not exposed to the health hazard in question in the course of employment with the current employer.

the medical grounds for the transfer still exist. If a less hazardous job is not available, the employer must provide wages and other benefits for up to 12 months; that obligation is reduced to the extent the employee receives any outside income, or compensation from other sources such as workers' compensation, unemployment compensation, and disability compensation.

The Committee expects that medical transfer protection will be provided only when found to be necessary in light of actual evidence, symptoms or conditions. Such protection has proved workable under other statutes with respect to employees who have evidence of black lung disease or of excessive lead in the bloodstream. In order to insure that the extension of such protection is workable here as well, the Committee has added a special provision exempting employers with 10 or fewer employees from medical transfer requirements. For these very small employers, a requirement to transfer 1 or 2 at-risk employees (or maintain them on the payroll) could significantly disrupt productivity and impede competitiveness.[31] The legislation therefore exempts them from having to offer medical transfer protection so long as they have made or are making a reasonable good faith effort to eliminate the occupational health hazard that triggered the medical transfer decision.

Employers (and others) are prohibited from discriminating against employees or applicants for employment on the basis that they are or have been members of a population at risk. Notified employees who are being urged to seek medical assistance must not be chilled by the prospect of punitive employer responses to their newly discovered status. The Committee therefore intends that the courts and the Secretary of Labor vigorously enforce the antidiscrimination requirements. The employer, however, does not violate those requirements by refusing to hire a job applicant if the job involved would necessitate exposure to the same occupational health hazard for which the applicant already has been notified. Further, an employer effecting a required medical transfer is not guilty of discrimination so long as the transferred employee maintains the same earnings and benefits (or "comparable" earnings and benefits if the employer has 10 or fewer employees).

The legislation also provides for the confidentiality of all individual employee records maintained in connection with the performance of any function authorized under the bill. Disclosure of such records is permitted only if necessary to perform a function authorized by the bill or with the consent of the individual employee or his or her personally designated representative. The purpose of these provisions is to establish strict rules governing the confidentiality of any individually identifiable records, which contain personal information that is created and maintained by federal agencies or agency contractors (including private employers, and State and local governments). The Committee intends the employee's personally designated representative to be a person that the employee has individually selected to have access to records under this bill.

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[31] The cutoff of 10 was chosen in reliance on previous action by Congress to exempt employers with 10 or fewer employees from certain specified requirements under the OSH Act. See, e.g., Public Law 93-517 (1974) (recordkeeping and reporting); Public Law 94-439 (1976) (exemption from enforcement of standards, rules or regulations); Public Law 95-480 (1978) (exemption from proposal or assessment of civil penalties under certain circumstances).

While the Privacy Act of 1974, 5 U.S.C. 552a, applies to federal agency records created under the bill, this provision on confidentiality is more rigorous than, and is meant to supersede, the provisions of the Privacy Act that permit disclosure pursuant to the "routine use" of a record. Under the Privacy Act, the "routine use" of a record is defined to mean "the use of such record for a purpose which is compatible with the purpose for which it was collected." 5 U.S.C. 552a(a)(7). By contrast, disclosure of a record containing personal information is permitted here only if the disclosure is essential to performance of a function under the bill. This strict test is not intended to interfere with any of the dissemination functions or research activities specifically authorized under the bill. Nevertheless, disclosures that are merely related to, but not necessary for, the functions of the bill will not be permitted. The Committee is deliberately establishing a more rigorous test in order to keep to an absolute minimum those disclosures made in connection with the bill's operations.

EFFECT ON OTHER LAWS

The legislation provides that a finding or determination by the Risk Assessment Board, a notification issued pursuant to Board action, and the initiation of medical monitoring following notification may not be the basis for a claim for compensation either in a State or Federal court or in an administrative process such as workers' compensation. It provides moreover that no evidence of any such finding, determination, notification or initiation is to be admissible in any compensation proceeding. At the same time, the medical and scientific studies on which Board determinations are based, any data which was available to the Board concerning exposure of individual employees, and the results of employee medical monitoring would continue to be admissible.

The Committee recognizes that, at a time of great public concern for what some have called a "liability crisis," many who are otherwise sympathetic with the legislation are anxious that it not aggravate that problem by expanding employers' liabilities. It is the Committee's intention to do nothing that would either increase the frequency of compensation claims or make it easier to establish such claims. The aim of the legislation—to help prevent occupational disease—is entirely distinct from the compensatory objectives of workers' compensation and tort litigation. On the other hand, this is not a "tort reform" bill. It is not the Committee's intention to restrict in any way the rights of employee-claimants under current state or federal tort or workers' compensation laws. The legislation is liability-neutral. It does not limit employer liabilities; it does not expand the rights of employee-claimants. It leaves the parties where they are today.

Section 10(g) of the Act implements the Committee's intention in this regard both substantively and by rule of evidence. As a matter of substance, no state or federal claim for compensation may be based on an action taken by the Risk Assessment Board, by NIOSH, or by the employee's employer pursuant to this Act (except, of course, for federal claims authorized by other provisions of the Act itself). An employee may not, for instance, allege in a

tort or workers' compensation claim that he or she has suffered damages due to emotional stresss, fear of disease, or mental anguish resulting from inclusion in a Board-determined population-at-risk, or from notification of such inclusion, or from the initiation of medical monitoring. The employee may bring such a claim, if applicable law permits, so long as the alleged emotional harm was generated independent of any finding or determination by the Board or any notification received from NIOSH. But actions taken by the Board, NIOSH, or the employer pursuant to the Act may not be a ground of the claim.

Section 10(g) reinforces this substantive rule with a rule of evidence. It requires that state and federal courts and administrative agencies draw a distinction between actions taken under the Act and materials used in making determinations under the Act. Studies and data that existed independent of the Act and were available to or used by the Board are to be admissible in evidence to the same extent as they are under current law. So too are the results of medical monitoring undertaken by employees. No reference to the Board itself, however, or to actions taken by the Board, by employers or by others acting pursuant to the Act is to be admissible. Thus, as an evidentiary matter as well, claims seeking compensation for stress, fear of disease, or other emotional harm arising from the notification process are barred.

The final sentence of section 10(g) is intended to insure that in compensation proceedings arising out of a hazardous occupational exposure, the mere receipt of notification may not trigger the running of any applicable statute of limitations, including a state statute. As discussed above, notification may not be used against employers as evidence of liability. The Committee also intends that notification not be used against employees as evidence either that the employee knew or should have known of the existence of the disease identified in the notice, or that the employee knew or should have known that specific occupational exposures were the cause of the identified disease. The Committee's approach in this regard is consistent with the so-called "discovery rule" adopted by many states, which provides that a statute of limitations does not begin to run until such time as the prospective plaintiff either knew or had reason to know the nature of the illness or injury and its operative cause. See, e.g., *Van Buskirk* v. *Carey Canadian Mines Ltd,* 760 F.2d 481, 498 & n.16 (3d Cir. 1985) (applying Pennsylvania law); *Harig* v. *Johns-Manville,* 284 Md. 70, 394 A.2d 299 (Md. Ct. App., 1978).

Although the provisions of section 10(g) are intended to supersede rules of evidence and procedure under state law, the Committee does not believe that these intrude impermissibly on the sovereign functions of the States. Under *Gracia* v. *San Antonio Metropolitan Transit Authority,* 469 U.S. 528 (1985), the boundaries of Congress' power under the Commerce Clause to affect state law are set primarily by Congress itself, not by any independent constitutional check on federal authority. By minimizing new litigation burdens on state courts while fully protecting employees' rights under existing state law, the Committee believes it is discharging its responsibility to protect the States' special position and to further the principles of cooperative federalism.

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ENFORCEMENT AND REPORTING

The Secretary is given authority to enjoin certain present or imminent violations of the Act by employers. The Secretary also may seek a civil penalty against an employer if the employer commits a knowing or reckless violation of the Act in the course of notifying its own employees.

Employees who are aggrieved by a violation of the provisions respecting medical monitoring, medical transfer, antidiscrimination or confidentiality may file applications for review with the Secretary of Labor. The Secretary of Labor must decide within a specified time frame whether there is reasonable cause, to believe that a violation has occurred. Upon a finding of reasonable cause, the Secretary of Labor must bring an action in U.S. District Court. The court is authorized to order injunctive or monetary relief as appropriate. If the Secretary of Labor finds no reasonable cause and denies the employee's application, the employee may appeal to U.S. District Court. Judicial review is based on standards intended to be coextensive with the Administrative Procedure Act, 5 U.S.C. 706(2)(A) through (E). If the District Court set aside the Secretary of Labor's determination, the employee may bring a private action in District Court.

In any action brought by the Secretary of Labor, an employer must be given a reasonable opportunity to prove that an individual who was notified under the Act is not in fact a member of a population at risk. Thus, for instance, an employer may challenge an employee's request for medical monitoring by proving that the employee received notification only because NIOSH incorrectly recorded the number of years of his exposure. While the Committee expects that such administrative inaccuracies will be infrequent, the employer should be given an opportunity to demonstrate that a factual error was made in the notification process. Employees are given the same opportunity to prove that they were omitted from notification through factual error. Neither employers nor employees may challenge before the Secretary of Labor determinations that have been made by the Board.

The Committee intends that the remedies set forth in the Act for alleged violations of the Act are the exclusive remedies available for violations of the Act. Employees, employers, and other interested parties may not seek relief under any other statutory or common law causes of action.

The legislation requires an annual report to Congress by the Secretary of Labor regarding implementation and enforcement of the Hazard Communication Standard as well as an annual report by the Secretary of HHS regarding implementation and enforcement of this risk notification legislation. The Committee expects that these reports will lead to ongoing improvements in the cooperative effort to address occupational disease problems. The annual report on S.79 should include information on both the effectiveness of the notification and medical monitoring in reducing the morbidity and mortality of occupational diseases, and the cost to the federal government of implementing this legislation.

VI. Cost Estimates

U.S. Congress,
Congressional Budget Office,
Washington, DC, September 11, 1987.

Hon. Edward M. Kennedy,
Chairman, Committee on Labor and Human Resources,
U.S. Senate, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has prepared the attached cost estimate for S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987, as ordered reported by the Senate Committee on Labor and Human Resources on July 23, 1987.

If you wish further details on this estimate, we will be pleased to provide them.

With best wishes.

Sincerely,

Edward M. Gramlich,
Acting Director.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 79.
2. Bill title: High Risk Occupational Disease Notification and Prevention Act of 1987.
3. Bill status: As ordered reported by the Senate Committee on Labor and Human Resources on July 23, 1987.
4. Bill purpose: To notify workers who are at risk of occupational disease in order to establish a system for identifying and preventing illness and death of such workers, and for other purposes.
5. Estimated cost to the Federal Government:

[By fiscal year, in millions of dollars]

	1988	1989	1990	1991	1992
Authorization level	25	25	25	.....	.....
Estimated outlays	16	23	24	9	2

The costs of this bill fall within budget function 550.

Basis of estimate.—The authorization level for the entire Act is stated in the bill for fiscal years 1988 through 1990. CBO assumes all authorized amounts are fully appropriated at the beginning of each fiscal year. Outlays are estimated using spendout rates computed by CBO on the basis of similar health service program data.

This bill would establish a seven member Risk Assessment Board to designate employee populations at risk of occupational disease. Based on the Board's findings, the Secretary of Health and Human Services would have the authority to declare certain employee groups at risk. Individuals in the group and their employers would be notified either by the Secretary or by certified private employers or state or local governments requesting to conduct notification.

The bill would also establish ten health centers from among existing education resource centers and similar facilities within the

federal and private sectors. These centers would provide health care services to employees notified as being at risk of occupational disease. Centers would also conduct research and provide education, training, and technical assistance to physicians and other professionals serving these employees. Costs associated with training and equipment for the centers would be funded from appropriations authorized by this Act.

Notified employers would be required to pay the costs of employee medical monitoring if hazardous exposure occurs while under their employ. The bill does not specify who would pay the cost of any necessary treatment.

At least $3 million of amounts subsequently appropriated in each year would be set aside to fund research, training, and education to better assist employees exposed to occupational health hazards and to better identify worker populations. The bill would also set aside at least $1 million of amounts subsequently appropriated to support occupational medicine and health programs through grants to schools of medicine and nursing.

6. Estimated cost to State and local government: The budgets of state and local governments could increase as a result of enactment of this legislation. The bill states that upon request, the Secretary may certify a state or local government to conduct notification of risk of occupational disease. State and local departments of health so certified would, under the bill, pay the costs associated with notification. However, CBO has no basis to estimate the number of state or local governments that might request to be certified by the Secretary or the costs to them of notification. In addition, the bill would require employers to pay for medical monitoring if their employees are exposed to occupational hazards while on the job. If a state or local government were such an employer, their budgets could be expected to increase to cover these costs.

7. Estimate comparison: None.

8. Previous CBO estimate: None.

9. Estimate prepared by: Carmela Dyer.

10. Estimate approved by: C.G. Nuckols (James L. Blum, Assistant Director for Budget Analysis).

VII. Regulatory Impact

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the following statement of the regulatory impact of S. 79 is made.

A. ESTIMATED NUMBER OF INDIVIDUALS AND BUSINESSES REGULATED AND THEIR GROUPS OR CLASSIFICATIONS

S. 79 is designed to establish a system for identifying and notifying workers at risk of occupational disease and to assist in the prevention of the illness and death of those workers.

The affected individuals would include the workers who are notified that they are part of a designated population at risk of disease. It is difficult to estimate the number of workers who would be notified under this Act. However, at a Labor Subcommittee hearing on S. 79, Dr. James Melius of the National Institute for Occupational Safety and Health estimated that between 100,000 and 300,000

workers could be identified and notified each year within the authorization included as part of the Act. The Act does not impose regulations upon the notified individuals, but rather sets out a mechanism by which the workers may receive medical assistance if they so choose.

Similarly, it is difficult to estimate the number of businesses affected by this legislation, as the only automatically affected businesses are employers of employees who elect to participate in medical monitoring or medical transfer activities as established by the Act. Additionally, employers who choose to apply for certification to conduct the notification of their employees who are members of a designated population at risk would be subject to procedures established by the Department of Health and Human Services in conjunction with the Act. All employers with 10 or fewer employees are exempt from the medical transfer provisions of the Act.

B. ECONOMIC IMPACT ON THE INDIVIDUALS, CONSUMERS, AND BUSINESSES AFFECTED

One of the primary goals of the Act is the early recognition and treatment of occupationally-related illnesses. Through early intervention, significant health care costs, in addition to human misery and hardship, will be spared. Estimates of the costs of occupational disease to the United States are included in Part II, Background and Need for Legislation. It has been estimated that occupational diseases cost the United States at least $7.1 to $9.7 billion in 1985. It is difficult to estimate the actual cost savings that could result from this legislation. However, as an example, it has been estimated that the yearly health care savings for a worker for whom medical monitoring successfully prevented the development of bronchogenic carcinoma could reach $54,000 or more. Such health care cost savings will greatly benefit employers offering health insurance plans, and will significantly alleviate the burden on Medicare and Medicaid programs. Consumers will benefit from these savings as well, as less of the cost of health care will be passed on to them.

Concerns have been raised about increased costs of workers' compensation or liability insurance as a result of claims brought by workers after notification. The United States General Accounting Office (GAO) found in a recent report to the ranking minority member of the House Subcommittee on Health and Safety that it was difficult to estimate such costs. GAO pointed out, however, that both S. 79 and its counterpart in the House, H.R. 162, had specific provisions limiting liability under the Act. See paragraph D of Part II of this report for further discussion of potential liability costs.

C. IMPACT OF THE ACT ON PERSONAL PRIVACY

In order to carry out notification responsibilities assigned under the Act, the Secretary is given access to records maintained by federal agencies or States and their political subdivisions for the purpose of obtaining names, addresses and work histories. All access to records is expressly conditioned upon compliance with the federal Privacy Act, 5 U.S.C. 552a, and the Committee believes that this legislation creates no significant additional personal implications.

The collection of routine data concerning notifications will be necessary to evaluate the effectiveness of this Act; however, these data do not involve any new personal implications.

D. ADDITIONAL PAPERWORK, TIME AND COSTS

This Act establishes a severn-member Risk Assessment Board within the Department of Health and Human Services that would be responsible for identifying and notifying populations at risk of occupational disease. The identification and notification process will necessitate the publication of notices in the Federal Register and the publication of individual notices to workers. Routine recordkeeping of notified individuals is required in order to evaluate the effectiveness of the legislation. It is difficult to estimate the volume of additional paperwork necessitated by the Act, but the Committee does not believe it will be significant.

IMPACT OF LEGISLATION ON EMPLOYERS, EMPLOYEES, AND THE ECONOMY

Pursuant to Senate Amendment No. 497 to S. 1420, the Omnibus Trade and Competitiveness Act of 1987 (100th Congress, 1st Session), the Committee has been encouraged to obtain objective analysis of the impact that legislation concerning employee benefits will have on employees, employers, and the economy.

The potential costs to employers of the Act are analyzed at length in Part II (Background and Need for Legislation) of this report (see section D, Potential Costs of a Federal Notification Program). The principal costs to employers involve medical monitoring expenses for their current employees who were exposed to an occupational health hazard while currently employed and who then elect to participate in monitoring. The Committee received cost estimates from Dr. Landrigan of the Mt. Sinai Medical Center and from the National Tooling and Machining Association concerning potential medical monitoring costs. A related potential cost is the medical transfer protection established in Section 9 of the Act. The Committee expects that medical transfer costs will not be substantial, but notes in any event that small businesses with 10 or fewer employees are exempt altogether from the medical transfer provisions.

The other potentially significant cost to employers concerns liabilities arising from claims brought as a result of notification under this Act. The Committee has concluded that it is not reasonably possible to estimate precisely the impact on employers of liability costs resulting from risk notification. Similarly, the U.S. General Accounting Office concluded in its report to the ranking minority member of the House Subcommittee on Health and Safety, "we could not find usable estimates or develop an acceptable approach for projecting the number of lawsuits and workers' compensation claims that might be filed as a result of risk notification and their costs." See Part II D, above, for further discussion of potential liability costs under this Act.

The American Cancer Society and the American Lung Association submitted testimony to the Committee that described the potential health benefits and cost savings to employees who are noti-

fied under the Act. The human and health care costs of occupational disease are staggering (see Part II B, above). If, as the Committee expects, notified employees take preventive action against occupational disease, the resulting savings will be substantial for employees (in terms of continued earnings and reduced medical expenses); employers (in terms of health insurance and health care costs); and the economy (in terms of a healthier and more competitive workforce). The impact of these benefits cannot be assessed in precise terms, however, and any estimate necessarily would be speculative.

The Committee also has difficulty assessing the effect of the Act on international competitiveness. While some of this nation's major trading partners have programs to notify workers of health risks, others do not. Additionally, it is not reasonably possible to estimate the potential costs of the legislation against its potential cost savings. The Committee concludes, therefore, that an estimate of the impact of the Act on international competitiveness is not feasible.

In sum, the Committee has concluded that given the absence of concrete date, "objective analysis" concerning the impact of S. 79 is not realistically possible. The same conclusion is reached by Dr. William G. Johnson, Professor of Economics at Syracuse University, who has written extensively on the economic consequences of occupational disease. A copy of Professor Johnson's letter to Senator Metzenbaum is included as part of this report. Finally, the Committee notes the observation of Senator Bumpers, Chairman of the Senate Committee on Small Business. During a hearing on S. 79 held before his Committee, Chairman Bumpers expressed serious doubt as to how one would arrive at an objective analysis of the bill's costs.

SYRACUSE UNIVERSITY,
THE MAXWELL SCHOOL METROPOLITAN STUDIES PROGRAM,
Syracuse, NY, September 16, 1987.

Senator HOWARD M. METZENBAUM,
Chairman, Senate Subcommittee on Labor,
Washington, DC.

DEAR SENATOR METZENBAUM: This is my response to a request from your staff to analyze the benefits and costs of the notification and monitoring program proposed in Senate bill S. 79. My reply is based upon a review of the major provisions of the bill and of amendment 497 to the Senate trade bill.

The answers to complicated questions are best begun with statements of simple facts. There are thousands of United States citizens who will become ill and may die from past exposures to hazardous substances in the workplace. The losses associated with these illnesses include losses of the worker's output (usually measured as lost wages), the costs of medical care, losses of investments in workers' training, the costs of finding and training replacement workers, and the costs of administering private and social programs that provide benefits or services related to the illness.

The benefits of a program that reduces either the incidence or severity of these illnesses are the reduction in the losses that would occur if the program did not exist. These losses are quite large. The

average loss of wage income to the family of a dead asbestos workers is $201,125, or $94,757 after deducting taxes and the income that would have been consumed by the dead workers (Johnson and Heler 1983). Consider, for example, the fact that the average total cost (wage loss plus medical care) per polio case has been estimated to have been less thatn $8,000 in 1986 dollars. The asbestos loss estimate, which does not include the costs of medical care, applied to projections of asbestos-related deaths through 2028 implies a gross loss of $309 billion.

The estimated costs of asbestos suggest that the potential benefits of reducing the incidence and severity of all occupational illnesses are very large.

The costs of the preventive health program proposed by S. 79 include the costs of administering the program, the costs of medical monitoring and the transaction costs associated with liability suits that might result from increases in information concerning the causes of occupational illnesses.

The benefits of S. 79 include a reduction in the number of illnesses and deaths from diseases, such as some cancers, which can be cured if detected at an early stage, and a reduction in the severity of illnesses which cannot be cured. An indirect but important benefit is the production of information on the nature and origins of occupational disease. The fact that information produced by this program could only be otherwise obtained by large federal investments in research programs suggests that the value of the information should be counted as a benefit.

Enumerating the benefits and costs is easier than measuring them. There are many problems, but the most important obstacle is the absence of data on the costs of medical care for occupational illness. In 1981, the Institute of Medicine called for an increase in research on the economic costs of occupational disease (Institute of Medicine 1981). To date, however, the literature is sparse. Johnson and Heler analyzed the economic costs associated with only one occupational risk factor, asbestos, and their cost estimates are limited to the wage losses of workers who died (Johnson and Heler 1982, 1983, 1984). In another attempt to estimate the costs of asbestos-related disease and death, McAvoy relies on assumptions based on average tort settlements rather than the actual losses of asbestos workers (McAvoy 1982). Dewees' cost-benefit analysis of limiting exposures in Canada does not consider the costs of health care (Dewees 1986). The results of the Rand study of asbestos litigation are controversial and, since the data were destroyed, are neither verifiable nor available for further analysis (Hensler et al. 1985).

The asbestos studies are unique in their scope, but none of them estimates health care costs. Despite decades of epidemiological research on occupational health hazards, we know more about the future health care costs of AIDS than the potentially much larger costs of treating occupational illnesses.

Most analyses of the benefits and costs of health improvement programs would compare the benefits and costs that I have described, being careful to rely on marginal benefits and costs, using procedures that are well known. The "objective analysis" described in Amendment No. 497 is somewhat different from the standard approach in that it focuses more on the impact of the program on

the prices of the products of firms that expose workers to hazardous substances than on social benefits and costs of illness prevention. The estimation of the program's impact on firms' costs requires that one estimate the net cost of the program to employers who expose their workers to hazardous substances, the nature of these employers' response to the costs and the extent to which consumers of the products of these firms reduce their purchases in response to an increase in the price of the product.

NET COST

The net cost of the program to employers requires that one subtract from the costs of medical monitoring, the amount that employers would have paid, through fringe benefits, for the illnesses and deaths that would be prevented if S. 79 is enacted. The relevant comparison is between the costs of monitoring all the workers who are at risk minus the employers' cost of care for those who become ill if notification and monitoring are not provided. The estimates of lives saved by early detection of cancer suggest that S. 79 could produce substantial net savings to employers who provide health care coverage to their workers.

Employers' concerns with increasing health care costs have led them to increase coinsurance requirements and to create Employee Assistance Plans and "workplace wellness" plans to reduce health care costs by improving the health of workers and their families. these plans typically emphasize lifestyle changes such as cessation of smoking, increased exercise and weight reduction, and assistance in controlling alcoholism and stress. The benefits of reducing the risk of occupational illnesses have, however, been largely overlooked. One important reason for this omission is the fact that no one has predicted the health care costs of occupational illness to firms. If S. 79 succeeds in notifying employers and workers of their expected costs, it would contribute to more productive workplace health prevention plans.

EMPLOYER RESPONSES

Employers can respond to increases in the costs of labor in many different ways, among which are a reduction in output and workforce, the substitution of capital equipment for labor or the use of substitutes for hazardous substances.

Manufacturers have, for example, substituted fiberglass for asbestos in the production of brake linings, shingles and other products in response to the costs incurred as the result of tort damages awarded for asbestos-related disease.

An estimate of the effects of employer responses to the costs of S. 79 requires that one reasonably predict the nature of their responses. Assuming that the costs of S. 79 were well defined, I do not believe that the data required to predict the responses of the employers who will be affected by S. 79 are available.

I regret that I cannot provide you with an analysis of the benefits and costs of S. 79. Lacking data on the medical care costs of occupational illness, no one can begin to evaluate the probable benefits of the notification and monitoring of specific cohorts of workers, nor the net costs of such a program to employers. Research on

the wage losses of asbestos-related diseases implies that the potential benefits of reductions in occupational illness and death are very large but, in my opinion, the benefits cannot be estimated with a reasonable degree of certainty.

I would also suggest that the analysis of benefits and costs (when it can be done) include data on the allocation of benefits and costs as well as the amounts.

S. 79 differs from many employee benefits in that its objectives are to reduce the costs of occupational illness rather than to compensate those who are ill. The costs of occupational illness are currently paid by employers and workers and the taxpayers. Research on the survivors of asbestos workers shows, for example, that survivors were compensated for less than 25 percent of their losses (net medical care) and that nearly one-third of the compensation they did receive was from the Social Security and Veterans' Administrations (Johnson and Heler 1983). Any analysis of the benefits and costs should, therefore, carefully define who will pay the costs of occupational illnesses. If taxpayers continue to subsidize high risk firms by paying a large share of the costs of occupational illness, estimates of the impact of S. 79 on the net cost to high risk firms' costs will omit the benefits to taxpayers, including low risk firms and their employees.

There are many issues of concept and method necessarily omitted in this response. I hope that what has been discussed is useful in your deliberations.

Sincerely,

WILLIAM G. JOHNSON,
Professor of Economics.

CITATIONS

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Hensler, Deborah, et al., "Asbestos in the Courts." The Institute for Civil Justice, The Rand Corporation, 1985.

Johnson, William G., and Edward Heler, "The Economc Consequences of Asbestos Associated Disease," in Irving J. Selikoff, M.D., Disability Compensation for Asbestos Associated Disease in the United States, Environmental Sciences Laboratory, Mount Sinai School of Medicine, 1982.

Johnson, William G., and Edward Heler, "The Costs of Asbestos-Associated Disease and Death," Milbank Memorial Fund Quarterly, Spring 1983.

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Institute of Medicine, "Costs of Environment-related Health Effects: A Plan for Continuing Study," National Academy Press, 1981.

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VIII. TABULATION OF VOTES

SUBCOMMITTEE ON LABOR

Rollcall votes taken during Subcommittee consideration of this legislation are as follows:

1. Quayle amendment numbers 7, 8, 9A, and 11, which provide that populations at risk be designated through the Administrative Procedures Act rulemaking procedure, and which increase the

powers of the Secretary in carrying out the provisions of this Act while reducing the powers of the Board.

Amendments rejected 2 yeas, 5 nays:

YEAS	NAYS
Quayle	Metzenbaum
Humphrey	Matsunaga
	Harkin
	Mikulski
	Stafford

COMMITTEE ON LABOR AND HUMAN RESOURCES

Rollcall votes taken during Committee consideration of the legislation are as follows:

1. Quayle amendment number 10, to provide a variance procedure different from the procedure established under section 6(e).

Amendment rejected 5 yeas, 11 nays:

YEAS	NAYS
Hatch	Kennedy
Quayle	Pell
Thurmond	Metzenbaum
Cochran	Matsunaga
Humphrey	Dodd
	Simon
	Harkin
	Adams
	Mikulski
	Stafford
	Weicker

2. Quayle amendment number 2, which changes the definition of small employer under section 9 from 10 employees to 50 employees.

Amendment rejected 5 yeas, 11 nays:

YEAS	NAYS
Hatch	Kennedy
Quayle	Pell
Thurmond	Metzenbaum
Cochran	Matsunaga
Humphrey	Dodd
	Simon
	Harkin
	Adams
	Mikulski
	Stafford
	Weicker

3. Metzenbaum motion to table Quayle amendment numbers 4A, 9, 11A, 13A, 18, and 20, which enhance the powers of the Secretary under the Act while diminishing the powers of the Board. Amendment 4A directs the Secretary to determine populations at risk rather than the Board. The Board would report directly to the Secretary rather than through the Director of the Institute. Amendment 9 directs the Board to transmit a notice of proposed determination to the Secretary rather than issuing such notice directly.

Amendment 11A directs the Secretary rather than the Institute to establish a telephone "hotline" for notified employees and to prepare and distribute health information on any risk subject to notification. Amendment 13A directs the Secretary rather than the Board to determine persons adversely affected under this Act in connection with the judicial review provisions. Amendment 18 directs the Secretary rather than the Institute to maintain records and require recordkeeping. Amendment 20 directs the Secretary rather than the Board to determine populations at risk in connection with civil actions.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

4. Metzenbaum motion to table Hatch amendment number 3, which requires OSHA to issue standards within 12 months on passive smoking in the workplace.

Motion agreed to 14 yeas, 2 nays:

Amendments rejected 5 yeas, 11 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Humphrey
Metzenbaum	
Matsunaga	
Dodd	
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Quayle	
Thurmond	
Weicker	
Cochran	

5. Metzenbaum motion to table Hatch amendment number 4, which provides for an employee and employer to recover from the tobacco producer to the extent that the employee's occupationally related disease also was caused by a tobacco product.

Motion agreed to 13 yeas, 3 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Stafford
Metzenbaum	Humphrey
Matsunaga	
Dodd	
Simon	
Harkin	
Adams	
Mikulski	
Quayle	
Thurmond	
Weicker	
Cochran	

6. Metzenbaum motion to table Hatch amendment number 8, which preempts stress claims where employee first learns of the occupational health hazard through notification even if the stress is not attributable to the notification.

Motion agreed to 11 nays, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

7. Metzenbaum motion to table Hatch amendment number 10, which limits attorneys' fees to 30 percent of the first $500,000 and 15 percent thereafter for class action suits relating to the subject matter of a notification under this Act.

Motion agreed to 10 yeas, 6 nays:

YEAS	NAYS
Kennedy	Pell
Metzenbaum	Hatch
Matsunaga	Quayle
Dodd	Thurmond
Simon	Cochran
Harkin	Humphrey
Adams	
Mikulski	
Stafford	
Weicker	

8. Metzenbaum motion to table Hatch amendment number 9, which creates a presumption of innocence for employers who comply with all Federal and State health and safety standards in lawsuits brought as a result of notification.

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Motion agreed to 10 yeas, 6 nays:

YEAS	NAYS
Kennedy	Pell
Metzenbaum	Hatch
Matsunaga	Quayle
Dodd	Thurmond
Simon	Cochran
Harkin	Humphrey
Adams	
Mikulski	
Stafford	
Weicker	

9. Metzenbaum motion to table Hatch amendment number 11, which provides that this Act does not authorize or preclude any causes of action under Federal or State law against producers of hazardous products.

Motion agreed to 10 yeas, 6 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Stafford
Metzenbaum	Quayle
Matsunaga	Thurmond
Dodd	Cochran
Simon	Humphrey
Harkin	
Adams	
Mikulski	
Weicker	

10. Metzenbaum motion to table Quayle amendment number 7A, which provides that in designating populations at risk, the Board should consider only populations that may derive health benefits from notification.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

11. Metzenbaum motion to table Quayle number 3A, Part 1, which modifies the defintion of "occupational health hazard" to require that a reasonable probability exist that chronic health effects have occurred, and to delete the specific list of substances included in the definition.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

12. Metzenbaum motion to table Quayle amendment number 3A, Part 2, which modifies the definition of "population at risk of disease" to delete reference to concentrations or durations of exposure.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

13. Metzenbuam motion to table Quayle amendment number 3C, which deletes "industrial or commercial process" from the definition of "occupational health hazard".

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

14. Metzenbaum motion to table Quayle amendment number 17B, which deletes the requirement that the employer provide medical monitoring for employees whom the employer "has reason to know" are members of the population at risk.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

15. Metzenbaum motion to table Quayle amendment number 17C, which limits to one year an employer's obligation to provide the same compensation to employees who have been removed to another job for medical reasons based on their being members of a population at risk.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

16. Metzenbaum motion to table Quayle amendment number 22, which prohibits claims for compensation for stress or emotional harm if the claims are based directly or indirectly on notifications, reports or findings issued pursuant to this Act.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

17. Metzenbaum motion to report the bill with an amendment in the nature of a substitute, as amended, out of the Committee favorably.

Motion agreed to 11 yeas, 5 nays:

YEAS	NAYS
Kennedy	Hatch
Pell	Quayle
Metzenbaum	Thurmond
Matsunaga	Cochran
Dodd	Humphrey
Simon	
Harkin	
Adams	
Mikulski	
Stafford	
Weicker	

IX. Section-by-Section Analysis

Section 1 establishes the short title of the Act as the High Risk Occupational Disease Notification and Prevention Act and sets out a Table of Contents for the Act.

FINDINGS

Section 2(a) states the findings of Congress concerning the exposure of employees to harmful substances, agents, and processes in the workplace and the need to notify workers of exposures to hazardous substances so that action can be taken to prevent or reduce the effects of occupational disease.

PURPOSES

Section 2(b) states the purposes of the Act: to establish a Federal program to notify workers at risk of occupational disease; to certify occupational health centers that specialize in the recognition, diagnosis, and treatment of occupational disease; to expand Federal research and education efforts on occupational disease; and to protect employees against discrimination on the basis of their notification of occupational disease risks.

DEFINITIONS

Section 3(1) defines "Board" to mean the Risk Assessment Board established by this Act.

Section 3(2) defines "commerce" as trade, traffic, commerce, transportation, or communication among or between the States or the District of Columbia or a possession of the United States, or between points in the same State but through a point outside thereof.

Section 3(3) defines "employee" as an employee of an employer of a business that affects commerce, or a former employee or such employer as to whom a Federal agency or the employer maintains personnel, medical, or exposure records.

Section 3(4) defines "employer" as a person engaged in business affecting commerce who has employees.

Section 3(5) defines "hazard communication standard" as the standard contained in section 1910.1200 of title 29 of the Code of Federal Regulations in effect as of January 1, 1987.

Section 3(6) defines "institute" as the National Institute for Occupational Safety and Health.

Section 3(7) defines "medical monitoring" to mean examinations or testing to aid in the diagnosis of a disease that has been the subject of a notice.

Section 3(8) defines "occupational health hazard" to mean an agent or industrial or commercial process found in the workplace for which there is statistically significant evidence that chronic health effects have occurred in persons exposed to such agent or process.

Section 3(9) defines "person" as one or more individuals, partnerships, associations, corporations, business trusts, legal representatives, or any organized group of persons.

Section 3(10) defines "population at risk of disease" to mean a class or category of employees who are exposed to an occupational health hazard under conditions comparable to the evidence linking the exposure to chronic health effects, and who are identified and designated as a population at risk by the Board.

Section 3(11) defines "Secretary" as the Secretary of Health and Human Services.

RISK ASSESSMENT BOARD

Section 4(a) establishes a Risk Assessment Board within the Department of Health and Human Services. The Board consists of 7 members, appointed by the Secretary from a list of nominees provided by the National Academy of Sciences. This section lists the composition of the Board and their terms of office. The Board reports to the Secretary through the Director of the Institute. The Secretary shall provide the necessary staff personnel. Title 5 of the United States Code is amended to provide for the compensation of the Board members.

Section 4(b) provides that the Board shall be independent of the Secretary unless otherwise provided in this Act.

FUNCTIONS OF THE BOARD

Section 4(c)(1)(A) describes the duties of the Board: to review studies concerning the incidence of occupationally-related disease, to identify and designate populations at risk of disease that should receive notification, to develop an appropriate method of notification of populations at risk, and to determine the appropriate type of medical monitoring or counseling for the disease associated with the risk.

Section 4(c)(1)(B) states that the Board may appoint experts on a disease that is the subject of a notification and include the report of the experts in the hearing record.

Section 4(c)(1)(C) provides that the Board may request information concerning occupational health hazards from any Federal agency or other government or private organization, subject to Federal privacy laws.

Section 4(c)(2) directs that in identifying populations at risk of disease, the Board shall consider the extent of evidence showing that a specific substance, agent, or process may be a causal factor in the etiology of chronic illness or long-latency disease, the employees in particular industrial classifications or job categories who are or have been exposed to such substances, agents, or processes, the extent of the increased risk of illness or disease created by occupational health hazards alone or in combination with such fac-

tors as diet and smoking, and other medical, health, and epidemiological factors.

Section 4(c)(3)(A) provides that in designating populations at risk of disease for notification, the Board shall consider the extent to which populations may derive health benefits from notification, and assign first priority to populations likely to benefit from medical monitoring or health counseling.

Section 4(c)(3)(B) states that in designating populations at risk, the Board may consider exposures for which their exists a permanent standard under the Occupational Safety and Health Act, the extent of medical monitoring already available to employees covered by the standard, the need to notify former employees as well as current employees, and the extent to which notification may prevent birth defects or miscarriages.

Section 4(c)(3)(C) directs that the Board and the Institute shall identify and notify as many employees at risk as appropriations and science permit, and that the Secretary shall include a detailed explanation of the reasons for the notifications in the report required by this Act.

Section 4(c)(4) directs that the Board shall make determinations for classes or categories of employees at risk and transmit the classes or categories of employees at risk to the Secretary within 10 days of the determination.

PROCEDURES FOR DETERMINATIONS

Section 4(d) directs that for each population designated for notification, the Board shall issue a notice of proposed determination, which shall be published in the Federal Register. The notice shall set forth which employees are being considered for notification, a statement of the basis for their inclusion, and the contents of the proposed notice. The public may submit comments within 60 days. The Board shall arrange for a public hearing within 45 days. The Board shall issue a final determination within 60 days after the hearing. The Board may extend the time between the issuance of notice and the issuance of a final determination, but the total time shall not exceed 150 days. Any aggrieved person may bring a mandamus action if a final determination is not made within the above-stated time periods.

Section 4(e) directs the Board to publish every 6 months in the Federal Register a list of the agents, industrial or commercial processes which are under review by the Board and which may be reviewed for possible notice of determination within 6 months. This agenda may be supplemented at any time.

Section 4(f) provides that the Board shall review new data on each of its determinations at least every 5 years.

EMPLOYEE NOTIFICATION AND COUNSELING

Section 5(a) directs that for each determination of a population at risk, the Secretary shall make every reasonable effort to notify each individual within the population. The Secretary shall direct the notification through the Institute.

Section 5(b) lists the contents of the notification: an identification of the hazard, the disease(s) associated with the hazard, the extent

of the risk, any known latency periods, any known factors that may increase the risk of illness or disease in combination with the occupational exposure, counseling information including the advisability of initiating a medical monitoring program, the most appropriate types of monitoring, the name and address of the nearest occupational and environmental health center, the protections for notified employees against discrimination based on the notification, information on employer responsibilities for medical monitoring, and the telephone number for the telephone hot line described below.

Section 5(c) directs the Institute to establish a toll-free telephone "hot line" for employees or their physicians to obtain medical and scientific information concerning the nature of the risk and its associated disease.

Section 5(d) directs the Institute, after consultation with the Board, to prepare and distribute other medical and health promotion information on the risk and its associated disease.

Section 5(e) provides that the Secretary may request information from any Federal agency, State, or political subdivision of a State for the purpose of obtaining names of employees subject to notification. The Secretary may also request information from any employer insofar as access is provided for under the Occupational Safety and Health Act or the Mine Safety and Health Act of 1977, and any employer insofar as relevant information is maintained under a State or Federal occupational safety and health law.

Section 5(f) provides that the United States or any agency or employee thereof (including employers acting in accordance with section 6, below) is not subject to suit or judicial or nonjudicial proceedings seeking monetary damages for their actions performed pursuant to this Act, unless the act or omission is a knowing and deliberate violation of this Act, or in the case of employers, a knowing or reckless violation of this Act.

Section 5(g) provides that any person adversely affected by a determination of the Board is entitled to judicial review of the determination by the United States Court of Appeals. Petitions shall be filed within 30 days of the determination by the Board. Upon filing of a petitition, the Secretary shall certify the record, and the court shall review the record. This section sets forth grounds for setting aside Board determinations, and provides that judicial review shall not operate as a stay of the Secretary's duty to notify employees unless the court specifically orders a stay.

MEANS OF EMPLOYEE NOTIFICATION

Section 6(a) provides that the Secretary is responsible for notifying employees at risk.

Section 6(b) provides that the Secretary may certify a private employer of State or local government to conduct notification, but no payment will be made for the cost of notification nor will the party have a right of access to Federal records for the purposes of carrying out the notification. The form of notification by a certified employer or State or local government shall conform to the extent possible to a model notification form issued by the Board.

Section 6(c) directs that for employees not currently exposed, the notification shall be transmitted to each employee in the designated population at risk who was exposed to the occupational health hazard within 30 years prior to the date of notification. If individual notification is not reasonably possible, the notification may be accomplished through public service announcements and other appropriate means.

Section 6(d) provides that employees who were exposed during the course of their current employment shall be individually notified wherever reasonably possible. If individual notification is not reasonably possible, public service announcements, prominently posted notices, or similar means may be used.

VARIANCE PROCEDURE

Section 6(e) provides that employers whose current or former employees are included as part of the population at risk may apply within 30 days of the final determination to exempt those employees from notification if the employer believes that the employees are not members of the population at risk. If the Institute concludes that the application raises an issue of matrial fact which is subject to reasonable dispute, the Institute shall publish a notice in the Federal Register within 30 days after receipt of the application and schedule a hearing on the disputed issue. During this period the Secretary is exempted from notifying the employees in question. Hearings shall be scheduled within 60 days. Within 30 days of the hearing (or of the receipt of the application if no hearing is held), the Institute shall issue a decision on the application(s) for variance. In determining whether to issue a variance, the Institute shall consider whether there have been significant mitigating factors that substantially eliminate the risk of developing the occupational disease under examination. Determinations by the Board may not be challenged as part of these proceedings.

OCCUPATIONAL AND ENVIRONMENTAL HEALTH CENTERS

Section 7(a) provides that within 90 days after the effective date of this Act, the Secretary shall establish and certify 10 health centers from existing health centers of the Institute, other Federal health facilities, and other private or governmental organizations. Additional centers may be established at a later date. Centers shall be selected on the basis of ability and experience in the recognition, diagnosis, and treatment of occupational disease, geographical proximity to designated populations, and training facilities for health professionals.

Section 7(b) states that the centers shall provide education, training, and technical assistance to physicians and other professionals serving notified employees, and shall be capable of providing diagnosis, treatment and medical monitoring for employees.

RESEARCH, TRAINING, AND EDUCATION

Section 8(a) provides that the Institute shall conduct or provide for research, training, and education designed to improve the means of identifying employees exposed to occupational health hazards and to improve medical assistance to them. This section lists

subjects to be included in the research, education and training. Experts and consultants may be used to carry out the activities specified by this section.

Section 8(b) amends Part F of title VII of the Public Health Service Act to add the following section:

Section 788A: Grants and Contracts for Training and Curriculum Development in Occupational Medicine.

Section 788A(a)(1) provides that the Secretary may make grants to schools of medicine and schools of nursing in which occupational health programs exist to assist with the costs of carrying out occupational health education or training for students and/or faculty.

Section 788A(a)(2) states that in making grants, the Secretary shall give preference to applicants which demonstrate the ability to recruit a significant number of participants and which demonstrate expertise or experience in providing education or training in occupational health.

Section 788A(b)(1) provides that the Secretary may make grants to schools of medicine and schools of nursing that do not have existing programs in occupational health in order to provide support for training and education programs in occupational health for faculty and students.

Section 788A(b)(2) states requirements for projects for which grants are made under this section.

Section 788A(c) requires the Secretary to make grants and contracts to not less than 10 schools of medicine or schools of nursing between October 1, 1987 and September 30, 1990.

Section 788A(d) provides for a least $4,000,000 per year to carry out this section.

Section 788A(e) clarifies the definitions of "graduate medical education program" and "school of nursing".

EMPLOYEE MEDICAL MONITORING PROVISIONS

Section 9(a) provides that the medical monitoring recommend by the Board as part of the employees' notificaton shall be provided by the employer at no additional cost to the employee if any part of the exposure occurred in the course of the employee's current employment by that employer. This section further provides that the employee may be required to meet copayments or deductibles required by the employer's health plan if monitoring is carried out with the use of the health plan. Current employers need only provide monitoring for individually notified employees or employees whom the employer has reason to know are members of the population at risk.

DISCRIMINATION AGAINST EMPLOYEES

Section 9(b)(1) prohibits the discharge or discrimination by any employer of any employee or applicant on the basis that the employee or applicant is or has been a member of a population at risk, unless the position to which the applicant applies involves exposure to the same occupational health hazard which was the subject of the risk notification. If it is medically determined that the employee should be removed to a less hazardous job, the employer

may do so as long as the employee maintains the same earnings, seniority, and other employment rights and benefits as though the employee had not been removed.

Section 9(b)(2) provides that employers with 10 or fewer employees may transfer an employee who is a member of population at risk as long as the new job has earnings, seniority and other employment rights and benefits as comparable as possible to the job from which the employee is removed. In doing so, the employer shall not violate the terms of a collective bargaining agreement.

EMPLOYEE MEDICAL REMOVAL PROVISIONS

Section 9(c)(1) provides that a member of a population at risk whose physician determines that he or she shows evidence of the development of the occupational disease described in the notice, or other symptoms or conditions increasing the likelihood that the disease will occur, shall have the option of being transferred to a less hazardous job at the same earnings, seniority, and other rights and benefits as if the employee had not been transferred. In providing the transfer, the employer shall not be required to displace any employee or violate the terms of a collective bargaining agreement.

Section 9(c)(2) provides that if an employer requests independent reconsideration of an employee's physician's findings, the two parties shall have 14 days to submit the matter to another mutually acceptable physician for a final medical determination to be made with 21 days. If the parties are unable to agree upon a physician, the Secretary (or the Secretary's local designee) shall appoint a physican. The employer shall bear all costs.

Section 9(c)(3) provides that the employer is only required to provide medical removal protection for individually notified employees or employees whom the employer has reason to know are members of the population at risk.

Section 9(c)(4) states that the employer must only abide by the above medical removal provisions for employees for whom at least part of the exposure to the occupational health hazard occurred in the course of the employee's employment by that employer. The medical removal provisions only apply to the extent that less hazardous jobs are available, and to the extent that the requesting employee is otherwise qualified for the job. If a less hazardous job is not available, the employee is entitled to protection for up to 12 months. The employer may require the employee to participate in followup medical surveillance. The employer's medical removal obligations are reduced to the extent that the employee receives compensation for lost earnings during the period of removal, or receives income from other employment.

Section 9(c)(5) provides that employers with 10 or fewer full-time employees are not subject to the above medicial removal provisions if they have made or are making a good faith effort to eliminate the occupational health hazard that is the basis for the medical removal decisions.

CONFIDENTIALITY

Section 9(d) establishes confidentiality of employee records unless specifically authorized by another provision of this Act or unless authorized by the employee.

ENFORCEMENT AUTHORITY

Section 10(a) directs the Secretary to require recordkeeping by the Institute or by employers acting pursuant to section 6, above, to monitor the numbers, types and results of notification under this Act.

Section 10(b) provides that the Secretary may bring an action in the United States District Court to enjoin an employer from engaging in violations of this Act. The Secretary may bring an action against an employer acting pursuant to section 6 of this Act for a knowing or reckless violation of a provision of this Act. Employers who are found in violation of this Act shall be assessed a civil penalty of not more than $10,000 for each violation.

REVIEW OF EMPLOYEE COMPLAINTS

Section 10(c)(1) provides that an employee who is aggrieved by a violation of section 9, above, may apply within 6 months to the Secretary of Labor for a review of the alleged violation. The Secretary of Labor shall investigate the complaint, and if the Secretary believes that a violation exists, the Secretary shall bring suit in the United States District Court. The employer shall have the opportunity to show that the aggrieved employee is not a member of a population at risk. A defense is established for cases where an employee failed to assert his or her rights within one year after receiving notification.

Section 10(c)(2) provides that the Secretary of Labor shall notify the complainant of the Secretary's determination within 90 days of the receipt of the application. If the Secretary denies the application, the Secretary shall notify the applicant of his or her rights of appeal.

Section 10(c)(3) provides that any person aggrieved by a determination of the Secretary of Labor may within 30 days of the determination petition the United States District Court for a review of the determination. This section lists grounds the District Court may use in setting aside a determination. In any action brought under this section, the aggrieved person shall have the opportunity to prove that he or she did not receive notification but is a member of a population at risk. If the Court sets aside the determination of the Secretary, the employee may bring an action of the type authorized by section 10(c)(1) above. If the Secretary does not act within 90 days as required in section 10(c)(2) above, an applicant may bring a civil action for mandamus in the appropriate United States District Court.

REINSTATEMENT AND OTHER RELIEF

Section 10(d) provides that any employee who is injured in violation of section 9, above, shall be restored to his or her employment

and compensated for any lost wages, costs of medical monitoring, and costs from bringing the allegation of violation.

Section 10(e) provides that any person that violates section 9 shall be liable for a civil penalty not to exceed $10,000 per violation.

Section 10(f) provides that the remedies provided in this Act shall be exclusive remedies for acts or omissions taken pursuant to or alleged to be in violation of this Act.

EFFECT ON OTHER LAWS

Section 10(g)(1) provides that findings or determinations that an employee or an employee population is or is not at risk, and evidence concerning the initiation or noninitiation of notification or medical monitoring under the Act, may not serve as a legal basis for or be introduced as evidence in connection with any claim for compensation, loss, or damage brought under State or Federal law, except for such claims as are established by this Act.

Section 10(g)(2) states that nothing in this Act precludes the admission into evidence of the results of medical evaluation or monitoring, or medical and scientific studies concerning the incidence of disease associated with exposure of individual employees to occupational hazards, or data concerning the exposure of individual employees to health hazards, in any claim for compensation, loss or damage brought under State or Federal law. This section further provides that notification pursuant to this Act will not affect determinations of timeliness of claims under applicable statutes of limitations.

Section 10(h) provides that no actions may be brought based on a good faith determination made by a physician under section 9(c).

REPORTS TO CONGRESS

Section 11(a) provides that the Secretary of Labor shall report to Congress each year regarding the implementation and enforcement of the hazard communication standard, including information on monitoring, enforcement, employee assistance, employee education, and federal court decisions.

Section 11(b) provides that the Secretary shall report to Congress each year regarding implementation and enforcement of notification under this Act, including information on notification, research, training and education, enforcement and assistance.

SUBJECTS OF FEDERAL AGENCY STUDIES

Section 12(a) requires each Federal agency that conducts epidemiologic studies on occupational disease to establish procedures for notifying the subjects of the findings of the study. If the subjects are found to be at risk of disease, the notification shall include certain information specified by this Act. No notice under this section imposes any liabilities or creates any rights under section 9.

Section 12(b) provides that all occupational epidemiologic studies conducted by a Federal agency shall include in the study design specific methods for notifying living subjects or their family members that they are part of a population at risk of disease.

REGULATIONS

Section 13 directs the Secretary to prescribe such regulations as are necessary to carry out this Act.

AUTHORIZATION OF APPROPRIATIONS

Section 14(a) authorizes $25,000,000 for each of the fiscal years 1988, 1989, and 1990 to carry out this Act.

Section 14(b) directs that at least $4,000,000 be set aside for section 8 of this Act and at least $1,000,000 of that amount be set aside to carry out section 788A of the Public Health Service Act.

EFFECTIVE DATE

Section 15 states that this Act shall be effective January 1, 1988, or 6 months after the enactment of this Act, whichever occurs first. The Board shall be appointed within 60 days of the effective date, and regulations necessary to administer the Act shall be issued by the Secretary within 120 days of the effective date.

X. MINORITY VIEWS OF MESSRS. QUAYLE, HATCH, THURMOND, HUMPHREY, AND COCHRAN

OVERVIEW

We strongly object to this legislation in its current form. However, we believe a responsible risk notification bill can be drafted and should be enacted into law. That goal can be achieved either through substantial amendments to this bill or by an alternative approach.

This legislation is designed to establish a process for the notification of workers who are at risk of contracting a disease as a result of their exposure to a hazardous substance or physical agent. No one can quarrel with such a purpose. Indeed we believe that S. 79 establishes a very important principle—that when the Federal government has knowledge that is relevant to the health of an individual, it is the government's moral obligation to provide the individual with this information.

However, we also believe that if the Congress decides to pass notification legislation, it is incumbent upon the Congress to be responsible about where, when and how to notify people they are at risk of contracting a disease. We should not enact legislation that will, in essence, put the federal government in the position of yelling "Fire" in a crowded theater. Unfortunately, as presently drafted, that is precisely what S. 79 will accomplish.

During Committee consideration, some improvements were made to the bill. However, considerably more work must be done to turn this highly complex and technical bill into responsible and worthwhile public policy. When the Committee considered S. 79, we offered a number of amendments that the Committee declined to accept. These amendments were based on principles which we believe should be the basis for any worker notification program:

Notification is appropriate and should take place only when there is a reasonable scientific, medical and ethical basis for it;

A risk notification program should not impose unreasonable costs on small businesses;

A disease notification program must be administered in a politically responsible manner; and

A disease notification program should not serve as the basis for establishing the liability of an employer for an occupational health hazard; nor should it have any bearing on tort or workers' compensation claims for harm resulting from an occupational health hazard.

While proponents of the bill do not disagree with these principles, the bill as reported does not comport with even one of them.

It is our view that S. 79, as reported, has the following major deficiencies—each is described in detail in the remainder of our views:

(1) the scientific basis for notification is inadequate;

(2) the Risk Assessment Board is completely independent of the Executive branch;

(3) the Federal government will notify individuals under circumstances where the individual will gain no health benefit and where the notifications may actually be detrimental to their health and well-being;

(4) the bill does not achieve its stated goal of tort neutrality;

(5) the bill does not deal with the practical realities of notification and is not workable in its present form;

(6) the bill does not address the difficulties small employers will face in meeting the obligations imposed by this bill;

(7) the job retention/medical removal provisions are inequitable; and

(8) the bill departs from widely relied upon and accepted procedures for administrative and judicial review.

In addition, we are concerned that, the Committee's effort to comply with the provisions of the recently passed Sense of the Senate Resolution calling for an objective economic analysis of all mandated emplyee benefits, is inadequate.[1] However, given the very short time between the passage of that resolution and the preparation of this report, this is certainly understandable. We are hopeful that the Committee will ensure that a more comprehensive economic analysis of this legislation will be available before this bill is considered by the full Senate.

It is our intention to address these concerns when S. 79 is brought to the Senate floor. Our detailed concerns about these specific areas are discussed below.

SCIENTIFIC BASIS FOR NOTIFICATION

We believe it is critical that more generally accepted scientific principles be incorporated into the notification decision-making process by:

(i) Revising the definition of an "occupational health hazard"

The definition of an "occupational health hazard" in S. 79 is one of the most important components of the notification scheme envisioned by the bill. Thus, its accuracy is essential to an appropriate notification program.

It is important that the definition of an "occupational health hazard" be revised to ensure that notification would be triggered only when there is a a scientifically respectable casual relationship between exposure to the hazard and consequent health effects.

In our view, the definition of an "occupational health hazard" in S. 79 simply makes no sense. Currently, the definition of "occupational health hazard" reads as "a chemical * * * for which there is statistically significant evidence * * * that chronic health effects have occurred in exposed employees." Indeed, the majority report

[1] This resolution was passed unanimously by the Senate on July 14, 1987 as an amendment to the trade bill. The purpose of the resolution is to ensure that the appropriate information is available to properly evaluate the costs and benefits of the various mandated benefit proposals that are under consideration. It simply provides that, each Senate Committee that reports legislation requiring employers to provide new employee benefits, should obtain an objective analysis of the impact of the legislation on employers, the economy and employees.

emphasizes that "[N]otification is warranted only where there is statistically significant evidence that chronic health effects have occurred in persons exposed to hazardous substances."

Statistics is, to quote the Encyclopedia Britannica, the "art and science of gathering, analyzing, and making inferences from data." Statistical significance means no more than that the inference has a certain degree of probability. However, under the definition in S. 79, no inference is required. The operative principle is that chronic health hazards have occurred in exposed employees.

However, that fact alone has no significance, statistical or otherwise. The mere fact that 50 cases of a chronic health hazard have occurred in exposed employees has no significance—such a fact is meaningful only if the health hazard can be related to the exposure through relevant scientific means. Without the requirement of such a relaitonship, the definition is really quite meaningless.

A concrete example demonstrates the inadequacy of the current definition. Kenneth R. Foster's article, "The VDT Debate," [2] reports on clusters of birth defects occurring in children of mothers exposed to video display terminals. Under the definition as proposed by S. 79, the test to determine the existance of an occupational health hazard is whether there is statistically significant evidence that the health effect occurred in exposed employees. There is no question that such effects did occur in the considerable number of instances cited in that article. Accordingly, VDTS would meet the definition of an occupational health hazard under S. 79.

But, as the article also demonstrates, the fact that these clusters exist is no evidence that there is a causal relation between the birth defects and the exposure. The author states "an epidemiologist would consider the reported clusters to be provocative, but inadequate to *demonstrate any connection between reproductive problems and vdts.*" (emphasis added) It is that connection which is lacking in the language in S. 79.

While the statistical analysis in the article is complex, it is clear that, under the definition in S. 79, the mere occurrence of a number of cases would meet the definition of a hazard. Thus, it is essential that this definition be revised to require a causal relationship between the health effect and the exposure.

(ii) Clarification of the use of the term "commercial and industrial process.

"Under the bill as currently written, an occupational health hazard includes not only chemicals and physical and biological agents but also an "industrial or commercial process." While it has never been too clear as to what that covered, it is our understanding that the authors of the bill mean it to cover two situations:

(1) When there is scientific evidence that exposure to certain combinations of substances results in adverse health effects, yet it is not possible to isolate the compound which is responsible. We certainly have no quarrel with the use of the term in this situation.

(2) When a method of working, such as hard physical labor, rather than exposure to a substance, is the cause of the hazard.

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[2] K.R. Foster "The VDT Debate," 74 American Scientist 163 (March-April 1986.

The majority report states that it is not intended that this term include work processes resulting in mere physical discomfort such as sitting in an office chair for 10 hours. However, the mark-up record on this legislation clearly states that it is intended to cover situations such as potential back problems arising from the use of a jackhammer. We do not think that this is a reasonable type of risk to merit notification—though it may well be appropriate for an OSHA workplace safety standard.

(iii) Tightening the scientific factors upon which determinations of risk are based.

The bill consistently requires that the Risk Assessment Board consider the extent to which certain evidence "may be" a causal factor in the etiology of illness or disease in making their determinations to notify. Putting such a speculative, open-ended standard in statute simply cannot be justified on the basis of sound science.

(iv) Incorporating more generally accepted scientific principles into the definition of a "population at risk"

S. 79 defines a "population at risk of disease" as employees exposed to an occupational health hazard under working conditions such as "concentrations or durations" of exposure comparable to those in studied populations. Again, this would establish a highly speculative standard for notification. This definition needs to be revised to ensure that scientific data are not used inappropriately. As currently drafted, the bill's definition of "population at risk" could result in incorrectly notifying individuals with low exposures, or short durations of exposures, that they are at risk of disease.

INDEPENDENCE OF THE RISK ASSESSMENT BOARD FROM THE EXECUTIVE BRANCH

We believe that the provisions of S. 79 relating to both the decision-making process and the decision-making authority for determining "populations at risk of disease" are fundamentally at odds with our basic system of government.

S. 79 gives final decision-making authority to the Risk Assessment Board in determining "at risk" populations. The Board is located in the Department of Health and Human Services, but is effectively independent of it. The Secretary appoints the Board to fixed terms but has no review or influence over its decisions.

That is bad government. We elect a President and confirm members of the Cabinet and other high-level officials. This subordinate body has no political accountability and is not answerable to anyone with such responsibility.

Presumably, the argument for the Board's independence is that we want to insulate these "scientific" decisions from politics. But let us not fool ourselves. Scientific decisions have policy implications; we live in a democracy and not in a technocracy. We need a decision-making process that is both scientifically sound and responsive to policy issues. The Committee rejected an amendment to S. 79 that would have accomplished that goal.

Such an independent board is unprecedented in our post World War II government. The authors of S. 79 argue that the National

Transportation Safety Board and the Foreign Service Grievance Board are very similar to the proposed Risk Assessment Board. A look at the facts demonstrates that this statement is simply incorrect:

The National Transportation Safety Board is investigatory in nature and it is accountable to the President; its main function is to conduct independent investigations of accidents.

The Foreign Service Grievance Board was established to adjudicate employee grievances, not set government policy.

Interestingly enough, there was similar debate during the enactment of OSHA. At that time, Republicans argued for an independent board, and Democrats supported placing power in the Secretary. But the Republicans argued for a Board that was appointed by the President and confirmed by the Senate. The Board would thus have had an appropriate degree of responsibility. Nobody argued for a technocratic body ensconced in the middle of the bureaucracy with no political accountability whatsoever.

NOTIFICATION TO INDIVIDUALS FOR WHOM THERE IS NO MEDICAL BENEFIT

As currently drafted, S. 79 would result in notifications to numerous individuals that they are at risk of contracting a disease for which there is nothing that can be done. We do not believe that adoption of such a policy by the Congress is appropriate.

The fact that there are large numbers of people who will be eligible for notification under this legislation but for whom no successful medical treatment exists is emphasized in the majority report. It discusses a NIOSH analysis of several categories of workers who might be eligible for notification on the basis of a number of mortality studies. NOISH concluded that while 110,005 workers could gain "direct medical/health benefits from notification", 137,967 workers were "potentially at high risk and should be notified but there are no effective intervention methods." Thus, more than 50% of the individuals to be notified in this situation would be receiving a notice from the Federal government that they were at risk of contracting a disease for which nothing could be done.

Let's take a realistic example. What do we suppose would happen if a retired 70 year old chemical worker who was enjoying his retirement on the Outer Banks in North Carolina received such a notice? Human nature would suggest that he would become and remain extremely upset about his health. He and his family would suffer anxiety and fear to no purpose. Is this really the result Congress wishes to achieve by this legislation?

The majority report points out that "recent developments in medical ethics support the principle that individuals should be informed whenever there is a reasonable certainty of risk". This position was set forth in a letter to the Committee by Dr. Edmund Pellegrino, Director of the Joseph and Rose Kennedy Institute of Ethics.

We do not agree with this view. We strongly believe that the time honored principle of medical ethics, that the patient should not be harmed without purpose, should apply in this legislation.

There is a very troubling distinction between the right to know that one has a very good chance of dying of a specific disease because there is no known medical intervention and the desire to know that information. Recently, some very telling examples have been reported in the news media. Two of the more notable examples are: (1) the availability of a test which can determine if certain individuals will develop Huntington's disease sometime in the distant future; and (2) the possibility that a new blood test may be feasible for the identification of individuals at early risk of Alzheimer's disease.

Before passing this bill, we need to ask ourselves whether the United States Congress should be the ones to decide that, yes, people must have that information.

TORT NEUTRALITY

Given the litigious society in which we live, it is unrealistic to think that a disease notification program will not generate an increase in liability claims.

While we do not believe that it is possible to prevent this legislation from generating claims under both tort and workers' compensation law, we do believe it is incumbent upon the Congress to ensure that this legislation is tort-neutral.

All members of Congress are certainly well aware that our legal system is in serious difficulty due to the proliferation of liability claims in recent years. We are all very aware of what impact this has had on the ability of businesses to obtain liability insurance and on the cost of that insurance.

Commercial liability premiums alone rose 72 percent in 1984–85. Last year, this was one of the top issues our constituents wrote and talked to us about. It would be bad public policy to pass legislation opening the door to new and unfounded claims on the system. While we commend the efforts of the sponsors of S. 79 to address this problem, considerable modification will be necessary to make this legislation tort-neutral.

WORKABILITY OF THE BILL

As the Committee discussed S. 79, its actual mechanics and complexities became very apparent. One subject that has been under much discussion has been the actual contents of a determination by the Risk Assessment Board that a population is at risk.

The bill provides that a population would be found to be at risk of disease when a class or category of employees had been exposed to an occupational health hazard under working conditions (such as concentrations or durations, or both) comparable to evidence indicating that chronic health effects may occur. It is relatively straightforward what a determination would say when very specific information relating to both concentrations and durations of exposure is available.

However, questions arise as to what constitutes comparable working conditions when information about either specific concentration or duration is not available. Will all employees who could have been exposed to a particular substance be notified? Will notification take place on an industry-specific or a plant-specific basis?

In an attempt to resolve this question, in April, minority staff requested the major groups supporting S. 79, the Chemical Manufacturers' Association (CMA), the AFL–CIO, and the American Electrinics Association (AEA), to prepare an example of a determination that might be triggered by an actual occupational health hazard.

While the CMA and the AFL–CIO have yet to respond to this request, after several months a response was finally received from the American Electronics Association. A copy of this letter is appended. (See Appendix I).

We think the material that the AEA did supply—simply a sample notification letter—is instructive because AEA fails to provide a determination as requested. Moreover, their notification letter assumes a type of determination that we already know can be written. It describes a situation where both concentration and duration information is available; yet the bill permits notification based on either concentration or duration .

Another very practical problem that has developed in discussing the implementation of this program has been the question of how the characteristics of a population at risk would be translated into an actual list of names and addresses of individuals who are properly within that population. Until we have a much better idea of what an actual determination will look like, it simply is not feasible to develop a workable process for dealing with this problem.

Given the importance of this matter to the actual implementation of this legislation, it was imprudent of this Committee to report out this bill until this material had been received and analyzed. If we do not receive this material because it is impossible to develop. It certainly suggests that the sponsors of this bill need to go back to the drawing board.

Further, in discussing the practicalities of this legislation, it should be noted that the majority report states that only 50 Federal employees will be required to implement this program. Such an assertion is either wrong or simply based on the most unrealistic assumptions about how this program can be implemented. To date, our notification experience has been in industry specific situations such as chemical plants. However, it is important to consider how the bill will work in the cross-industry type of situation.

Let's take a highly plausible scenario that may well unfold if this bill is enacted. Assume, for the purpose of discussion, that the study NIOSH is currently conducting on video display terminals concludes that persons exposed to vdts for five years or more are at risk. Assume further that the Board agrees with that finding. Presumably, in this event, the Board would define the "category or class" of employees as persons exposed to vdts for five years or more. Given that more than 28 million people currently use vdts, it is foolish to think that a mere 50 employees could handle the task of notifying them.

The majority report simply does not reflect the complexities of implementing this legislation. Locating former employees is not an easy task. Indeed, the Interim Report on the pilot project NIOSH conducted dealing with workers exposed to a potent carcinogen, beta-naphthylamine (BNA), concludes that a relatively large number of employees (approximately 245 out of the cohort of 1,094

individuals) could not be located despite fairly rigorous search efforts. It should be noted that this was a notification project that simply dealt with one company and one plant.

MEDICAL REMOVAL/JOB RETENTION PROVISIONS

While some progress has been made in addressing these issues, considerable revision of these provisions is still necessary because they are inequitable.

Job transfers with benefit and salary retention would be required where a non-exposed job was available. However, where one was not available, the employer would be required to provide the employee with salary and benefits for a 12-month period. Thus, employees who are unable to transfer due to the lack of a suitable job receive income protection for a year, while those who are able to obtain a transferee position receive income protection forever.

Adoption of S. 79 in its current form, would create in statute, a 2-tier wage structure throughout much of American industry. Under S. 79, many employees would receive substantially higher wages for work traditionally performed by lower wage workers. Such a system is certain to generate enormous discontent. It contradicts common sense and elementary notions of fairness to pay employees dissimilar wages for identical work.

IMPACT ON SMALL BUSINESSES

While the bill was amended to exempt employers with 10 employees or less from the medical removal requirements the bill would impose, we do not believe that the impact of this legislation on our nation's small businesses has been adequately addressed.

We do not think it is realistic to expect that small businesses will be able to absorb the employer costs this bill will impose. We do not believe it would be appropriate to exempt employees of small businesses from notification. However, we do not think it is realistic for the Congress to require small businesses to provide the costly medical monitoring benefits Section 9 of the bill would entail. As we all know, many small businesses do not offer health insurance benefits: Approximately 55 percent of all firms with less than 100 employees offer coverage while 45 percent of all firms with less than 10 employees offer coverage.

Moreover, the so-called "small business exemption" provided for in S. 79, in reality accomplishes nothing for small businesses who will be affected by this law. It only exempts slightly more than 1/15 of the workforce and would leave over 1/3 of all employers covered.

The authors of the bill argue that a standard of 10 employees or less is the appropriate standard for a small business exemption since it is the one used to exempt small businesses from the safety inspection requirements of OSHA. However, the intent of OSHA is to ensure a safe workplace. S. 79 has nothing to do with the safety of the workplace per se. Further, we are not suggesting the exemption of any workers from the purported benefit to be received under this legislation—notification that their health may be at risk.

DEPARTURES FROM ACCEPTED PROCEDURES FOR ADMINISTRATIVE AND JUDICIAL REVIEW

The bill is replete with provisions that depart from widely accepted and relied upon procedures for administrative and judicial review.

To cite just one example, it permits an individual who is aggrieved because of a delay in the issuance of a final determination by the Board bring a civil action for mandamus.

Mandamus is an extraordinary writ which suggests the most extreme emergency to permit an individual to not first exhaust his administrative remedies. Black's Law Dictionary notes that "The writ of mandamus is a drastic one, to be invoked only in extraordinary situations." The sponsors of S. 79 have yet to state why the legislation would present the requisite extraordinary situation.

Congress enacted the Administrative Procedures Act to address the failure of agencies to carry out their functions properly. If that law is so ineffective that special provisions are required in legislation such as this, it is time for the Congress to take a serious look at the APA and amend it accordingly.

DAN QUAYLE.
ORRIN HATCH.
STROM THURMOND.
GORDON HUMPHREY.
THAD COCHRAN.

APPENDIX 1

AMERICAN ELECTRONICS ASSOCIATION,
Washington, DC, July 2, 1987.

Mr. ROBERT GUTTMAN, Esquire,
Minority Counsel, Subcommittee on Labor, Committee on Labor and Human Resources, U.S. Senate, Washington, DC.

DEAR BOB: AEA and its member companies have appreciated the several opportunities we have had to discuss with you issues of practical implementation of S. 79. We share your concern that the bill must be workable. In particular, we agree on the importance of issues surrounding workplace exposure. In fact, the amendment to the original version of S. 79, requiring the Risk Assessment Board to take exposure into account, is one of the critical amendments that eased our early concerns about the legislation.

We have discussed and communicated with you on the subject of how and when such exposure issues are to be considered. The amendment approved by the Committee to establish an exemption for employers with fundamentally different factors is one appropriate mechanism for taking into account differences in exposures among employers involved in the same business activity. It is, however, a "back end" mechanism, one that addresses particulars of the exposure issue after the basic class or categories of "population at risk" has been defined. To ensure sound decisionmaking, exposure also must be taken into account to the maximum extent possible at the front end (that is, in the determination by the Risk Assessment Board's and the Institute on which employees are at risk

and should be notified). We believe S. 79 is consistent with this approach.

More specifically, in carrying out its duties to determine "populations at risk," the Board and the Institute are required under sections 3(1) and 4(c)(2) to consider comparability of exposure between groups that have been found to be at risk and other employees in similar circumstances before expanding the notice to non-studied employees. To carry out this responsibility, the Board is expected to provide advanced notice of potential classes or categories of employees that it is evaluating, and to provide full notice and comment procedures prior to making any determinations. Through these procedural protections, the Board is expected to obtain extensive information on workplace conditions and exposures, provided by employers, employees, trade associations, and other knowledgeable parties to help it determine those employees who are truly at risk.

HYPOTHETICAL NOTIFICATION

We are sending this notification to you because you are in a class of employees that has been identified by the federal Risk Assessment Board (see attached for description of Board) as having potentially been exposed to XYZ during the course of your employment with Acme, and as therefore, being at increased risk of contracting cancer of the spleen. To prevent occurrence of this disease or to mitigate the effects of this disease, we recommend that you enter a medical monitoring program, to be provided free of charge by Acme.

Receiving this notice does not mean that you will contract cancer—rather that because of your possible occupational exposure, you are at increased risk, relative to the population at large, of contracting cancer of the spleen at some point in your life. The normal rate at which this disease occurs in the population at large is 10 out of 10,000 people. The Risk Assessment Board has concluded that 15 out of 10,000 employees with exposure to XYZ above 10 ppm for more than five years are at risk of contracting cancer of the spleen. Working conditions at Acme between 1965 and 1975 could give rise to that level of exposure.

With most forms of cancer, there is a latency period—that is a period of time between exposure and the actual occurrence of symptoms of the disease. In the case of cancer of the spleen, that latency period is normally 15 to 20 years.

A special program has been set up at Acme to ensure that you receive appropriate medical monitoring and health counseling as recommended by the Risk Assessment Board to prevent occurrence of the cancer or, if it should occur, to detect at an early stage any symptoms of the disease. Detecting the disease at an early state is important in stopping its development.

The special monitoring and counseling program is available to you free of charge. We strongly recommend that you participate in this program and have made an appointment for you for June 16, 19XX to discuss this notice and the medical monitoring program with Dr. Smith.

If you or your family has any questions about this notice, or your health, please call Dr. Smith at ————. You may also contact a special "hotline" at the National Institute of Occupational Safety and Health at (800) ————, or the Midwest University Occupational Health Center at ————————.

We are also advising you that federal law prohibits discrimination against you in employment on the basis of your having received this notice.

The final determination on which employees are to be notified should be expressed as specifically as possible in terms of employees exposed to a particular substance or process, in a particular job category or categories, at a specified concentration for a specified duration. Normally, exposure is a factor of both concentration and duration. Where such information is not available, workplace conditions may be used as a surrogate. Specifying job category will ensure full consideration of exposure and facilitate compliance. For example, by listing the categories of the industries and the conditions of exposure (concentration, duration, workplace conditions), employers will know for certain that they are covered by the notification requirement. On the other hand, a notice stated only in terms of concentration and duration does not provide employers adequate indication that they are covered by the notice requirements. A hypothetical notification incorporating this approach is attached.

The bill as drafted reflects this approach. Legislative history would, however, be useful to clarify the point. In addition, in order for the Board to address these important exposure issues in a thoughtful, focused manner, one of the first things the Board should do is to establish through a public progress procedures to deal with exposure questions—how to extrapolate from the groups that have been subject to studies to other similarly situated group; provision of opportunities for employers and others to provide information on work practices; employee protection; exposure levels; etc. Legislative language or legislative history could clarify this approach.

The American Electronics Association fully appreciates that its member companies would be covered by this legislation, just as it would apply to other manufacturers. We continue to feel that our industry can, will, and should comply with employee safety and health practices consistent with the goal of the legislation.

We hope that the hypothetical notification enclosed will be helpful to you, and appreciate your continued interest in assuring development of an effective and practical worker notification program.

Sincerely,

MORRIS A. WARD,
Director, Environmental and Occupational Health.

77-401 O - 87 - 4

MINORITY VIEWS OF MR. HATCH

While I agree with my colleagues on the Labor and Human Resources Committee (Committee) that morbidity and mortality due to exposures to hazards in the work place are significant and serious problems in this country, I respectfully disagree that S. 79, the High Risk Occupational Disease Notification and Prevention Act, is the best or most appropriate solution.

S. 79 establishes a new independent agency within the Department of Health and Human Services, the seven member Risk Assessment Board (Board). Appointments to the Board are made by the Secretary, but he or she may only choose from a pool of individuals selected by the National Academy of Sciences. Unlike other independent agencies, the Board members are not confirmed by the Senate. Moreover, the Board's decisions are not reviewable by the Secretary, nor are its members answerable to the Secretary. In sum, this legislation would create an agency in the executive branch that is in many respects independent of the executive and whose only accountability is to Congress through the appropriations process.

The Board is given broad authority to name occupational health hazards, designate populations at risk, determine appropriate types of medical monitoring, and determine types of notification. Once the Board determines that a substance is an occupational health hazard, large numbers of workers may be notified, without any meaningful consideration of whether the notification will result in any benefit to the worker.

Notification carriers with it a significant number of new rights for the worker and new obligations for their employers. Under this legislation, employees who are notified must be provided free medical monitoring by the employers as frequently as the Board determines appropriate. It is presumed that this right to monitoring continues throughout the life of the employee. If an employee's personal physician has some objective reason to believe that the employee's current position may place his or her health at risk, then an employee must be transferred to another position without any loss in pay or seniority. If another position is not available, the employee is entitled to up to one year's severance pay.

Moreover, the bill contains new anti-discrimination provisions for notified workers and job applicants. Once an individual is notified, any subsequent employment decision—be it a demotion, transfer, termination, or a refusal to hire by another employer—will be affected. The burden will be on the employer to demonstrate that the subsequent decision was not motivated by the fact that the employee had been notified in accordance with S. 79.

To understand S. 79, one must first understand the differences between the three types of intervention which can be taken to combat the health hazards associated with exposure to occupation-

al health hazards. Primary intervention refers to steps that can be taken to reduce or eliminate the possibility of exposure to the occupational hazards. Installing engineering controls to eliminate or reduce emissions is one form of primary intervention. Wearing equipment to protect the respiratory system from silicosis would be another example, as would protective ear devices or safety glasses.

Secondary intervention refers to measures which can be used to reduce morbidity and mortality after exposure to a health hazard, but before symptoms of the occupational disease have developed. The objective of secondary prevention is to prevent or cure a disease. Consequently, early detection of a disease would be considered successful secondary intervention when it eventually lead to a curtailment or cure. Efforts to eliminate other risk factors such as smoking or alcohol use can be considered either primary or secondary depending on when the effort is undertaken, but traditionally they are considered to be examples of secondary intervention.

Tertiary intervention consists of those efforts made after the development of the occupational disease in an effort to reduce or eliminate morbidity and mortality. Most traditional medical treatment falls into this category.

S. 79 focuses primarily on secondary intervention, rather than primary intervention which can prevent employees from being exposed to health hazards in the first place. The Committee Report states that this legislation "is likely to trigger beneficial health effects for at least two reasons— * * * through early detection * * * [and] greater precautions taken by both employers and employees * * *" Unfortunately, taking greater precautions is primary prevention and is not addressed in this legislation. Nothing in the bill requires or even suggests to employers or employees means or methods to eliminate or reduce exposures that may increase the risk of occupational disease, nor is the Board responsible for developing such methods.

As discussed in more detail below, the recently expanded OSHA Hazard Communications Standard, by far the most comprehensive workplace safety and health standard ever issued, focuses on primary intervention. Effectively enforced, that standard largely negates the case for S. 79.

SMOKING

Despite the repeated references concerning the need to provide and ensure a safe workplace, the majority has chosen to draft S. 79 so that it specifically proscribes the Risk Assessment Board from ever considering whether cigarette smoke is an occupational hazard. The supporters have accomplished this by defining an occupational health hazard in Section 3(8) as "a chemical, a physical, or a biological agent, *generated by or integral to* the work process and found in the work place * * *" (emphasis added).

The sponsors have made it quite clear that since cigarette smoke is generated by employees and not the work process and it is not integral to the work process, it can not be addressed by the Risk Assessment Board. This ban on consideration is permanent. Apparently, the majority feels that the air employees breathe is not a sufficiently important part of the work process to be addressed.

It is absolutely incomprehensible that a bill that can be interpreted to address everything from viruses and other pathogens, to lower back pain caused by sitting at a desk, would specifically and intentionally avoid a known, prevalent workplace health hazard that is killing working men and women every day. It is especially perplexing that the majority would resort to this form of prior restraint given the scientific data already in existence concerning the health hazards of cigarette smoke.

The majority was unusually candid in why it has chosen this odd public policy. They feel that without a carefully crafted exemption, the tobacco industry would exercise its considerable political muscle and defeat this legislation. I find it quite distressing that in the Committee's righteous and rigorous pursuit of a healthy workplace, no thought is given to unnecessary expenses, lost jobs, and soaring litigation, but great deference is given to the presumed political power of one single interest group.

Passive smoking

Tobacco smoking can be divided into two categories: active and passive. Passive smoking occurs when a non-smoker is exposed to smoke from the burning tobacco products of others, an exposure quite common in the American workplace. Unfortunately, most Americans do not yet realize passive smoking exposes them to the same health hazards as the actual smoking of tobacco. Every day, healthy working men and women are involuntarily exposed to cigarette smoke at work, thereby jeopardizing their own health and safety.

The Office of Technology Assessment (OTA) in its report on "Passive Smoking in the Workplace: Selected Issues" found that "there is ample evidence that nonsmokers are exposed to the elements of tobacco smoke when they are around people who are smoking." (May 1986, p. 1) In a 1986 report ("The Health Consequences of Involuntary Smoking"), the Surgeon General concluded that:

> The comparison of the chemical composition of the smoke inhaled by active smokers with that inhaled by involuntary smokers suggests that the toxic and carcinogenic effects are qualitatively similar, a similarity that is not too surprising because both mainstream smoke and environmental tobacco smoke result from the combustion of tobacco. (p. 7)

A large number of independent scientific panels have reached similar conclusions regarding the hazards of passive smoking. The OTA also stated that:

> More than a dozen studies have been published during the 1980's that address the possible association of passive smoking and lung cancer. Taken one by one, the studies can not be considered "definitive"; however most investigators have found that passive smoking elevates a nonsmoker's risk of lung cancer, and results in about half the studies were statistically significant. (p. 3)

For any other chemical, physical, or biological agent, a single "statistically significant" study showing "chronic health effects

have occurred in persons exposed to such agents" would be sufficient to trigger notification. (S. 79, Section 3(8)) But, if the issue is cigarette smoke, documented death is not a sufficient basis on which to trigger the provisions of this Act.

Other scientific experts have been even more definitive. The National Research Council stated that "public policy should clearly articulate that involuntary exposure to tobacco smoke has adverse health effects and ought to be minimized or avoided where possible." (Indoor Pollutants. 1981, p. 8) The National Academy of Science in its reports on "The Airline Cabin Environment" in 1986 concluded that passive smoking "is a hazardous substance and is the most frequent source of complaint about aircraft air quality." (p. 5)

Perhaps the strongest conclusions, however, have been reached by the Surgeon General. In his 1986 report referenced above, he concluded:

> Involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers * * * [and] the simple separation of smokers and nonsmokers within the same air space may reduce, but does not eliminate, the exposure of nonsmokers to environmental tobacco smoke. (p. 7)

There is more than ample evidence demonstarting that passive smoking is a health hazard and it is a health hazard in the workplace. There is, in my mind, no legitimate justification to legislate a massive notification program purported to ensure workplace health and safety that fails to address a hazard that we know is killing Americans every day. Unfortunately, the majority disagreed and voted against several amendments I offered that dealt directly with this problem.

I recognize that some members of this Committee, who have an excellent record on protecting the health of workers, do not feel that this bill is the appropriate place to deal with smoke in the workplace. While I can appreciate that caution, I can not, at the same time, support legislation which precludes the Risk Assessment Board from ever considering the health hazards of smoking. Caution is one thing. Prohibition is another.

Active smoking

While active smoking is not by itself an occupational health hazard, it should also be addressed in this legislation because of its unique relationship to occupational diseases. In his textbook on "Environmental and Occupational Exposures" (1983) Dr. William N. Rom stated:

> The opportunities for adverse interactions between cigarette smoking and occupational exposures are legion * * * Cigarettes may not only facilitate entry of these agents into the body, but also may cause them to be chemically transformed in the intense heat of the burning cone * * * Combined exposure to workplace agents and cigarette smoke may result in an additive or multiplicative biological effect. (p. 792-3)

Because of the relationship between smoking and occupational diseases, I asked the Centers for Disease Control (CDC) to provide me with a list of occupational health hazards, the number of workers exposed to these hazards, and what medical intervention they would recommend. (A summary of the data they provided is attached.) CDC identified slightly more than 18 million workers who have been exposed to 36 occupational health hazards.

Not surprisingly, CDC felt that smoking played a role in the active development of occupational disease for 83 percent of the workers exposed, and, for 67 percent of the workers, smoking cessation is the only risk factor intervention available.

For the remaining 17 percent, CDC felt that smoking did not play a role in the contracting of the disease. But more importantly, for 99.75 percent of these remaining workers, CDC felt that there is no available risk factor intervention other than counseling about possible future symptoms.

The evidence speaks for itself. At this point in medical science, the only real, effective, available method of secondary intervention to prevent occupational diseases is smoking cessation. In sum, any legislation which hopes to reduce morbidity and mortality from occupational diseases must either focus on primary prevention and reduce exposure to occupational health hazards or stress smoking cessation. S. 79 does neither. Senator Metzenbaum himself recognized the important role tobacco plays with occupational diseases when he introduced S. 79. He observed:

> Workers exposed to asbestos run a high risk of contracting lung cancer, a risk that becomes even more grave if they smoke cigarettes. By assisting such workers to give up smoking, we can reduce significantly the incidence of this deadly disease.

Despite these laudable sentiments, S. 79 fails to provide any real assistance. Moreover, the majority voted down an amendment I offered that would have allowed employers to require notified employees to attend smoking cessation courses if paid for by the employer.

The majority argues in its report that cigarette smoke is not itself an occupational health hazard because it does not satisfy the definition of a health hazard found in the legislation, a definition expressly written to exclude cigarette smoke. The sophistry of this line of reasoning is obvious, and it is quite disappointing that the majority has chosen to ignore the growing evidence of the dangers posed by passive smoking.

What is even more troubling, however, is that the majority goes on to state that cigarette smoking is "at most a contributing factor distinct from the burden of risk associated with occupational factors." How anyone could make such a assertion, especially given the excellent records several of the sponsors have concerning cigarette smoke baffles the imagination.

Smoking is not some isolated factor in the health equation. The Centers for Disease Control have made it clear that smoking cessation is often the only available method to prevent contracting a disease or controlling its growth after exposure has occured. We know that for several occupational diseases, smoking dramatically in-

creases the possibility of contracting disease. The Surgeon General has demostrated that passive smoking is not distinct from the risk associated with occupational factors. Smoking harms; it injuries; it kills. Its presence in the workplace cannot be avoided through grammatical gimmickry. If the majority is sincere in its desire to protect employee health, a sincerity I feel is genuine, it must come to terms with the reality of cigarette smoke in the workplace.

CURRENT LAW

If we could start from scratch to develop legislation aimed at reducing morbidity and mortality from occupational diseases, what would we do? First, producers would be required to evaluate the hazards of every chemical they produce. Second, containers of hazardous chemicals would be accurately labeled as to their contents and appropriate hazard warnings. Third, each employer would be required to keep a list of every hazardous compound found in the work place, with safety information, training procedures, and health information which is available to past and present employees. Fourth, workers would receive training on proper use of hazardous chemical.

This program is already law. The expanded Hazard Communications (Hazcom) Standard becomes fully effective May 20, 1988, and requires all listed above. The Standard recognizes a worker's right to know and requires every employer to provide a variety of information to workers.

The Hazard Communications Standard covers 32 million workers in nearly 4 million worksites nationwide and covers as many as 575,000 hazardous products. It is applicable if one or more positive toxicological study indicates adverse health effects and it applies to both health hazards and physical hazards. The estimated cost to employers of implementation during the first year is over $680 million.

In addition to this Standard, OSHA's access to medical records standards gives present and former workers the right to inspect their exposure and medical records maintained by the employer, and other OSHA standards dealing with many wide-spread workplace hazardous substances already require employers to provide regular medical monitoring.

These OSHA programs complement those administered by the Mine Safety and Health Administration, the Environmental Protection Agency, the Department of Transportation, and other federal agencies. While there may be room for improvements and modifications, many of the provisions of S. 79 are already law. Given the large number of agencies and regulations already in place, it makes more sense to work within the existing regulatory framework, not avoid it entirely as would occur under S. 79. Our federal history is replete with examples of the confusion and difficulties caused when different bureaucracies are given duplicative missions. Duplication of effort within the federal government has never led to more effective enforcement.

COST/BENEFIT

The supporters of S. 79 feel that it will be a cost-effective solution to the problems associated with occupational disease, but both its cost and its effectiveness are questionable. The Committee has assumed that the Risk Assessment Board will notify 100,000 to 300,000 workers per year and will only require annual medical monitoring. Using Dr. Landrigan's estimate of $224 per medical procedure, they have calculated medical monitoring cost during the first year of $22 million to $67 million.

These figures can be misleading, however, because the Board is under no obligation to select an occupational disease which involves small populations. Given other initiatives before Congress and the federal government, it is easily conceivable that the Board could declare AIDS an occupational health hazard for all health care workers. The number of workers involved in this instance, requiring both notification and medical monitoring, could be almost elight million. Medical monitoring in this case could easily cost billions of dollars per year.

Nor is the Board barred from requiring notification for occupational hazards already being addressed by OSHA. Notification on asbestos, for example, would involve four million workers. In addition, nothing in the legislation restricts medical monitoring to an annual physician visit. The Board has the authority to require as many visits as it deems appropriate, regardless of any doubts as to the cost effectiveness of these visits.

Moreover, the cost of notification would also go up proportionately as the number of workers affected increases. The supporters of this legislation named several occupational health hazards in the report which provide some examples of how costly notification could be. It would require $26 million to notify the 800,000 workers exposed to lead, $125 million to notify the 3.8 million workers exposed to silicosis, and $132 million to notify the 4 million workers exposed to asbestos.

Other examples could be just as, if not more, costly. Nothing in S. 79 would prevent the Board from determining that AIDS, hepatitis, tuberculosis, cytomeglia virus, or X-rays are occupational health hazards, resulting in the notification and medical monitoring of millions of health care workers and other employees. In every one of these there is at least one study, and in most cases multiple studies which easily meet the requirements set forth in Section 3 that there must be "statistically significant evidence (based on clinical or epidemiologic study conducted in accordance with established scientific principles) that chronic health effects have occurred in persons exposed to such agents or process."

One could argue, of course, that the risk of exposure may not be great. But S. 79 does not require, however a substantial, great, or high risk to trigger its provisions: it merely requires a "statistically significant" risk. In fact, the only place "High Risk" appears in S. 79 is in its title.

In addition, while the Board can set priorities, it is not required or even allowed to perform a cost-benefit analysis when making its determinations. The supporters of this legislation have argued that while the Board in theory could declare the diseases mentioned

above to be occupational health hazards, it is doubtful they ever would. Again, given the federal government's regulatory record, there is little reason to assume that future bureaucracies will act in a manner we in Congress view today as being prudent. This assumption by the majority is especially troubling, given the bill's prohibition on executive branch supervision.

In addition to the other federal and private sector costs imposed by S. 79, there seems to be little doubt that its real impact will be on liability insurance and workman's compensation costs. While S. 79 does not establish per se any new legal theories for suing employers, it will create new factual circumstances that will provide fertile grounds for thousands of claims.

The response of the supporters to this problem has been a largely superficial effort to achieve tort neutrality. For example, while the notification itself is not admissible, the contents of the notification may be used and will provide the basis for ready-made litigation. Similarly, while the notification can not serve as the basis for a stress claim, stress claims are not preempted. If any employee receives the same information from a newspaper article, a story on the nightly news, information provided by the employee's union, or information provided by the physician during the medical monitoring, a stress claim can be filed.

Not unexpectedly, the attorneys for the plaintiffs are ready. The AFL–CIO has already established a litigation group and published a booklet entitled, "Don't Suffer Without Compensation. Find Out How to Take Your Occupational Disease Claim to Court." Now all they need is S. 79.

CONCLUSION

When viewed in the aggregate, the proponents of S. 79 have raised several serious problems which deserve our attention. We must as a nation ensure that American working men and women are free to perform their duties in a safe working environment. Employees should not have to choose between a paycheck and their health, nor should they be forced to live in ignorance of the dangers to which they may be exposed.

Unfortunately, S. 79 does not provide a real solution to the problems it raises. Instead of fostering programs and methods to prevent exposure, it emphasizes notification. Instead of coordinating with existing federal agencies and departments, it establishes a new, overlapping and duplicative mandate for a new bureaucracy. Instead of coming to terms with the dangers of active and passive smoking, S. 79 legislates around one of the most prevalent and deadly hazards found in the workplace. At times, it seems that the real beneficiaries of this legislation will not be the American worker but the American Bar Association.

To create an effective occupational health care program, we can not ignore what the federal government is already doing, nor can we divorce ourselves from the economic consequences on the federal government and the private sector, especially small businesses. And we can not pretend that American working men and women do not have some responsibility for their own health. The sponsors of this legislation have raised a number of important and worthy

issues. Unfortunately, the answer they have provided is not a realistic solution. I have attached a copy of the letter from the Department of Labor, along with an addendum from the Justice Department which expresses the Administration's views on S. 79.

ORRIN G. HATCH.

APPENDIX

SUMMARY OF INFORMATION PROVIDED BY CDC

	Hazard	Workers	Code
1	Asbestos	4,000,000	1
2	Coal tar	78,764	2
3	4-nitrobiphenyl	(1)	1
4	Alpha-naphthylamine	2,132	1
5	4,4'-methylenebis	2,094	1
6	Methyl chloromethyl ether	(1)	1
7	3,3'-dichlorobenzidine	879	1
8	Bischloromethyl ether	11,400	1
9	Beta-naphthylamine	5,816	1
10	Benzidine	1,650	1
11	4-aminodiphenyl	(1)	1
12	Ethyleneimine	1,712	1
13	Beta-propiolactone	38	4
14	2-acetylamino-fruorene	896	1
15	4-bimethyaminoazo-thylamine	1,453	1
16	N-nitrosodime-thylamine	7,815	5
17	Inorganic arsenic	660,000	2
18	Lead	800,000	3
19	Coke oven emissions	59,000	1
20	Cotton dust	559,700	1
21	1,2-dibromo-3-chloro-propane	3,231	3
22	Acrylonitrile	55,698	2
23	Ethylene oxide	107,450	3
24	Vinyl chloride	29,836	2
25	Carbon monoxide	1,997,559	2
26	Benzene	2,000,000	3
27	Beryllium	30,000	1
28	Cadmium	1,500,000	1
29	Chloroprene	43,712	1
30	Talc	527,523	1
31	Fibrous glass	200,000	1
32	Methyl butyl ketone	220,000	3
33	Polychlorinated biphenyls	12,000	3
34	Radon daughters	23,000	1
35	Silica	3,793,655	1
36	Formaldehyde	1,600,000	1
	Total	18,337,013	

[1] No estimate provided by CDC.

Codes:
1—Smoking only risk factor modification.
2—Smoking plus a second risk factor.
3—No risk factor available for modification, counsel for early symptoms.
4—Sunlight is only risk factor modification.
5—Alcohol is only risk factor modification.

U.S. DEPARTMENT OF LABOR,
SECRETARY OF LABOR,
Washington, DC, September 21, 1987.

Hon. EDWARD KENNEDY,
Chairman, Committee on Labor and Human Resources,
U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Senate may soon be considering S. 79, the "High Risk Occupational Disease Notification and Prevention Act of 1987." This letter is to inform you of the Administration's strong opposition to enactment of broad individual risk notification legislation as embodied in S. 79. We continue to oppose S. 79, as amended, and we will recommend that the President veto the bill if it is presented to him.

This legislation unnecessarily duplicates current Federal efforts regarding the evaluation of hazards in the workplace and notification of workers, and would result in substantial litigation, in Federal tort liability, and would impose enormous costs on employers, consumers, workers and the Federal government. If the Congress decides that legislation is needed in this area, we believe that Federal effort would be better spent in improving and strengthening ongoing occupational health activities under existing statutory and regulatory authority rather than creating new governmental authorities and adopting broad approaches that are untested and problematic.

The Departments of Labor and Health and Human Services are carrying out several administrative and regulatory efforts which would not only be more effective in providing information to workers and preventing occupational disease, but would also avoid many of the legal and practical difficulties of the individual risk notification approach. Notable among these efforts is the recent expansion of the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard to all private sector employers. OSHA anticipates that an expanded Standard will significantly reduce the incidence of occupational cancers and other chemically related occupational illnesses by ensuring that workers understand the potential hazards of chemicals on the worksite and are trained in how to protect themselves. Moreover, an expanded Hazard Communication Standard will reach tens of millions of workers, far more than could be reached by an individual notification program. This Standard will be effective in preventing occupational disease because, unlike S. 79, it will provide immediate information in the workplace to prevent dangerous exposures before, not after, they have occurred.

We continue to strongly oppose the requirement is S. 79 that the Federal government undertake notification of workers other than those directly involved in Federally supported studies for a number of reasons, incuding the scientific difficulty of extrapolating risks to non-studied workers, the practical difficulties of identifying and locating non-studied workers, and the likelihood of false notification.

We remain convinced that S. 79, as amended, will generate substantial tort and administrative litigation, much of it unfounded and without merit. In fact, despite assertions to the contrary, the

amended bill presents greater liability problems than previous versions. Enclosed are Department of Justice comments explaining how and why this would occur. The significant increase in tort liability will exacerbate the liability crisis in the civil justice system. Particular harm will occur in the area of products liability, with especially severe impact on small business. It may, indeed, jeopardize the very existence of a significant number of such enterprises. Thus, S. 79 will extend the effects of the current tort liability insurance crisis to other parts of the economy. The high defense and other costs that the litigation will entail must inevitably be passed on to the public through higher prices and loss of jobs. Moreover, resources will be drawn away from productive activities. Finally, S. 79 lays a foundation for unwarranted expansion of liability for the Federal government and for individual government employees. We strongly oppose individual risk notification for its focus on the courts, rather than the workplace, as the forum for preventing occupational disease.

We are also concerned about the high potential costs of this legislation as compared to the extreme uncertainty over its effectiveness in preventing occupational disease. Of particular concern is its disproportionate impact on certain sectors of the economy. In addition to the increased cost or nonavailability of liability insurance, small businesses will be hit particularly hard by the costs of medical surveillance and medical removal. The current S. 79 contains a limited exemption from the medical removal provisions for employers with fewer than 10 employees; however, this exemption is too narrow to have much practical effect. These and other concerns were discussed in the recent hearing conducted by the Senate Committee on Small Business on June 10, 1987. In addition, discussion of these bills has not given adequate attention to the potentially serious financial impact that the notification and other requirements of S. 79 would have upon the nation's 860,000 farm employers, particularly given the high rate of turnover among agricultural employees. It is imperative that Congress carefully considered the litigation and economic consequences of this bill.

We are advised by the Office of Management and Budget that there is no objection to the presentation of this report to the Congress, and that enactment of S. 79 in its present form would not be in accord with the program of the President.

Sincerely,

WILLIAM E. BROCK,
Secretary of Labor.
EDWIN MEESE III,
Attorney General.
RICHARD E. LYNG,
Secretary of Agriculture.
OTIS R. BOWEN,
Secretary of Health and Human Services.
BRUCE SMART,
Acting Secretary of Commerce.
JAMES ABDNOR,
Administrator of the Small Business Administration.

Enclosure.

JUSTICE DEPARTMENT COMMENTS UPON REVISED S. 79

We have reviewed the latest version of S. 79 (committee print of an amendment in the nature of a substitute, dated July 30, 1987), the "High Risk Occupational Disease Notification and Prevention Act of 1987," to determine whether it continues to present a significant potential for generating increased tort and administrative litigation. This potential was a major basis for the Justice Department's original opposition to S. 79.[1] After reviewing S. 79, as amended, we remain convinced that it will dramatically increase occupational disease litigation in both the private and public sectors, perhaps even *more* so than its predecessor.

As a preliminary matter, however, we continue in our strong objection to reposing responsibility for worker notification decisions with the Risk Assessment Board created by S. 79.[2] Although part of the Department of Health and Human Services, the Board is completely independent of the Secretary in performing its functions. And it is the Board's obligation to make final agency decisions concerning whether and to what extent populations are notified about exposure to suspected occupational hazards. Given the gravity of such decisions, and their potential impact, the responsibility for making a "final decision" in any particular case is more appropriately left to the Secretary, not the Board.

Regarding the potential liability of the government, we continue to be concerned by the prospect of increased litigation against officers and employees of the United States as a result of the performance of their duties under S. 79. Under the original, the Secretary and employees of the Department of Health and Human Services were given limited protection from personal liability for some acts or omissions performed pursuant to S. 79. This "qualified immunity" did not encompass all federal officers or employees. Nor did it apply to all activities likely to be required of federal officers or employees in performing their worker notification duties. In its present version, S. 79 has corrected these omissions.

Nevertheless, the most significant personal liability problem associated with S. 79—the qualifications placed

[1] See Letter to Honorable Edward M. Kennedy, Chairman, Committee on Labor and Human Resources, United States Senate, from the Attorney General and the Secretaries of Labor and Health and Human Services, dated April 9, 1987.

[2] We note that the latest version of S. 79 has significantly changed the nature of the Risk Assessment Board. Instead of five members, all of whom were to be appointed by the Secretary of Health and Human Services from within the ranks of the Public Health Service, the board has been enlarged to seven, only four of which can be PHS members. Also, the Secretary must now choose appointees only from among nominations submitted by the National Academy of Sciences. See Section 4(a).

upon the protection it provides—remain essentially unchanged. S. 79, as amended, abrogates the immunity it provides to federal officers and employees for any act or omission which is alleged to be a "knowing and deliberate violation" of the Act.[3]

In our real-world experience, such qualifiers inevitably open the door to all manner of lawsuits which attempt to equate a "knowing and deliberate violation" to any act or omission which, in retrospect, is determined or alleged to be a violation. We are confident that this "qualified immunity" will, in practice, provide only limited protection to artfully pleaded individual-capacity lawsuits aimed at federal officials.

Turning to the private sector litigation which S. 79 is likely to generate, we see *no* improvement in the amended version. Those who think otherwise apparently rely upon Section 10(g), which purports to limit the evidentiary value of board decisions concerning "populations at risk" and whether to notify or not notify a particular group of workers.[4] These decisions, of themselves, may not under the bill form the basis for a personal injury lawsuit or a workers' compensation claim. Nor would these decisions be admissible as evidence in any such proceedings. However, this largely was true under the original version of S. 79. And we have never been particularly concerned about the probative value of a specific board decision in determining the merits of an individual claim or civil action.[5] Notwithstanding its proponents' assertions to the contrary, this provision will do virtually nothing to limit the impact that S. 79 will have on liability litigation.

Our concern was, and continues to be, that the simple act of individually notifying large numbers of workers that they may have been exposed to a substance which *may* cause certain diseases, inevitably will lead to a flood of mostly meritless claims against employers (through workers' compensation claims) and product manufacturers (through product liability lawsuits). No doubt some of these claimants genuinely will suffer from work-related illnesses. Many more, however, will suffer from no disease, or from a different disease from that which was the subject of the notification. Many others will sue based upon their fear of contracting the disease (a fear probably generated by the notification), or upon the increased likelihood of contracting the disease.

This phenomenon (which has manifested itself in the past), is particularly disturbing when those who are notified to be "at risk" actually face no such risk or, at most,

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[3] See Section 5(f)(1). The language in the original version of S. 79 was a bit different. It limited the protection it provided to acts or omissions which were not "willful." We see no significant difference between the two terms.

[4] The coordinate provisions in the original version of S. 79 were also contained in Section 10(g).

[5] Of course, regardless of the admissibility of the decision itself, the "record" upon which a particular decision to notify was based largely will be admissible. Section 10(g)(2).

an extremely small risk. It may be that most of these meritless claims ultimately will be denied, but not before generating substantial transaction costs in the form of attorneys' fees and other litigation expenses. We are convinced that the prospect of such litigation, the inevitable rise in workers' compensation insurance premiums, and the administrative costs associated with implementing the Act, will seriously jeopardize the financial viability of many businesses—particularly small businesses.

It thus would be quite inaccurate to characterize the amended bill as "litigation neutral." While the bill provides that plaintiffs' attorneys cannot simply use the notification as the basis for their lawsuits, the notification establishes the framework for such lawsuits by stating the cause-of-action (*e.g.*, the potential diseases associated with the potential exposure), identifying the affected class of plaintiffs, and setting forth the studies which would be the basis for the complaint (that is, the studies used to justify the notification). Most importantly, however, such notification would create an instant "demand" for litigation by persuading employees that they have been exposed to a toxic substance which may have adverse health consequences. The fear (which, in many cases, may border on public hysteria) generated by these notifications will lead many of the notified employees—perhaps even the vast majority—to seek legal counsel, and thereby almost certainly lead to litigation.

Ironically, such notifications will give substantial credibility to plaintiffs' attorneys, who often serve to exacerbate such a public reaction by further advertising (often in highly graphic and alarmist terms) both the potential claim and their services (for example, there is nothing in the bill to prevent an enterprising plaintiffs' attorney from sending a letter to all notified employees informing them of their potential claims and his availability should they desire legal representation). Indeed, our experience with toxic tort cases amply demonstrates that plaintiffs' attorneys frequently are a major factor in generating the very public fear which fuels such litigations.

Finally, it should not be overlooked that such government notification will carry substantial weight with judges, even if the notification may not be formally admitted into evidence. It thus may be very difficult to have such claims dismissed by way of summary judgment if the judge is aware that a federal agency has officially notified the affected class of their potential exposure and the potential adverse health consequences. If nothing else, our experience indicates that a judge would be far more likely in such a case to allow the claim to proceed to trial. In sum, S. 79, as amended, is just as likely to fuel the liability litigation explosion as its predecessor.

As for administrative litigation against the government, S. 79 provides for citizen enforcement actions (civil mandamus lawsuits by any "aggrieved person") against the Risk

Assessment Board whenever final agency concerning notification of a potential "population at risk" is not completed within 105 days (or 150 days if the Board can demonstrate exceptional circumstances and good cause).[6] Moreover, this is in addition to the provisions which allow "adversely affected or aggrieved" persons to seek judicial review in a United States Circuit Court of Appeals of the Board's ultimate decisions concerning what constitutes an occupational health hazard and whether and to what extent "populations at risk" should, or should not, be notified about a risk associated with exposure to a particular process or substance.[7]

So too, judicial reversal of a notification decision arguably is more readily obtained under the latest version of S. 79. Section 5(g)(3) now includes a fifth basis upon which such a reversal may be predicated—a lack of substantial record evidence to support the Board's decision.[8] This may increase the opportunities available for courts simply to substitute their judgment for that of the Board concerning the merits and substance of a particular notification decision.

A key problem with these provisions in addition to the increased likelihood of administrative litigation, is the fact that these provisions make it even more likely that notification decisions ultimately will not be made within the Executive Branch, but by the courts. Thus, federal judges may end up dictating whether notification will take place, who will be notified, what they will be notified of, and even precisely how the notification will read.

In a related area, S. 79, as amended, has added judicial review provisions to its discussion of the Secretary of Labor's responsibilities to investigate and correct complaints of illegal discrimination by employers against persons who are determined to be members of a "population at risk." In the original, employee complaints of illegal discrimination or benefit reduction were to be investigated by the Secretary of Labor, but whether that investigation led to action against the employer was within the Secretary's discretion. In its current version, if the Secretary determines that no action is required, i.e., the complaint is meritless, the complainant may challenge that determination in a United States District Court.[9] The district court may then reverse the Secretary of Labor's decision and if so, the complainant, himself, is authorized to bring a civil enforcement action against the employer.[10]

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[6] Section 4(d).
[7] See Section 5(g).
[8] The other four bases, identical to the only four contained in the original version of S. 79, are a finding that the decision was: arbitrary, capricious, or an abuse of discretion; contrary to constitutional right, power, privilege, or immunity; in excess of statutory jurisdiction, authority, or limitation; or, without observance of procedure required by law. See Section 5(g)(3) of S. 79. 100th Cong., 1st Sess. (Jan. 6, 1987).
[9] See Section 10(c)(3).
[10] Id.

The prospect of a civil suite against one's employer for lost wages, reinstatement, etc., undoubtedly will foster significant number of complaints, many of them marginal or specious. Not only will the Secretary of Labor be forced to divert assets to investigate these claims, but additional resources necessarily will have to be devoted to defending the Secretary's conclusions in court.

XI. Changes in Existing Law

In compliance with rule XXVI paragraph 12 of the Standing Rules of the Senate, the following provides a print of the statute or the part or section thereof to be amended or replaced (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

TITLE 5, UNITED STATES CODE

GOVERNMENT ORGANIZATION

* * * * * * *

§ 5316. Positions at level V

Level V of the Executive Schedule applies to the following positions, for which the annual rate of basic pay shall be the rate determined with respect to such level under chapter 11 of title 2, as adjusted by section 5318 of this title:

Administrator, Agricultural Marketing Service, Department of Agriculture.

Administrator, Agricultural Research Service, Department of Agriculture.

Administrator, Agricultural Stabilization and Conservation Service, Department of Agriculture.

Administrator, Farmers Home Administration.

Administrator, Foreign Agricultural Service, Department of Agriculture.

Administrator, Rural Electrification Administration, Department of Agriculture.

Administrator, Soil Conservation Service, Department of Agriculture.

Administrator, Bonneville Power Administration, Department of the Interior.

Administrator of the National Capital Transportation Agency.

Associate Administrators of the Small Business Administration (4).

Associate Administrator, National Aeronautics and Space Administration (7).

Associate Deputy Administrator, National Aeronautics and Space Administration.

Deputy Associate Administrator, National Aeronautics and Space Administration.

Associate Deputy Administrator of Veterans' Affairs.

Archivist of the United States.

Assistant Secretary of Health and Human Services for Administration.

Assistant Attorney General for Administration.

Assistant and Science Adviser to the Secretary of the Interior.

Chairman, Foreign Claims Settlement Commission of the United States, Department of Justice.

Chairman of the Military Liaison Committee to the Atomic Energy Commission, Department of Defense.

Chairman of the Renegotiation Board.

Chairman of the Subversive Activities Control Board.

Chief Counsel for the Internal Revenue Service, Department of the Treasury.

Chief Forester of the Forest Service, Department of Agriculture.

Additional officers, Department of Education (4).

Commissioner of Customs, Department of the Treasury.

Commissioner, Federal Supply Service, General Services Administration.

Director, United States Fish and Wildlife Service, Department of the Interior.

Commissioner of Food and Drugs, Department of Health and Human Services.

Commissioner of Indian Affairs, Department of the Interior.

Commissioners, Indian Claims Commission (5).

Commissioner of Patents, Department of Commerce.

Commissioner, Public Buildings Service, General Services Administration.

Commissioner of Reclamation, Department of the Interior.

Commissioner of Vocational Rehabilitation, Department of Health and Human Services.

Commissioner of Welfare, Department of Health and Human Services.

Director Advanced Research Projects Agency, Department of Defense.

Director, Bureau of the Census, Department of Commerce.

Director, Bureau of Mines, Department of the Interior.

Director, Geological Survey, Department of the Interior.

Director of Science and Education, Department of Agriculture.

Deputy Commissioner of Internal Revenue, Department of the Treasury.

Deputy Director, Policy and Plans, United States Information Agency.

Deputy General Counsel, Department of Defense.

Associate Director of the Federal Mediation and Conciliation Service.

Associate Director for Volunteers, Peace Corps.

Associate Director for Program Development and Operations, Peace Corps.

Assistants to the Director of the Federal Bureau of Investigation, Department of Justice (2).

Assistant Directors, Office of Emergency Planning (3).

Fiscal Assistant Secretary of the Treasury.

General Counsel of the Agency for International Development.

General Counsel of the Department of the Air Force.

General Counsel of the Department of the Army.

General Counsel of the Nuclear Regulatory Commission.

General Counsel of the Department of the Navy.

General Counsel of the United States Arms Control and Disarmament Agency.

General Counsel of the National Aeronautics and Space Administration.

Administrator of the Panama Canal Commission.

Manpower Administrator, Department of Labor.

Members, Renegotiation Board.

Members, Subversive Activities Control Board.

Deputy Under Secretaries of Defense for Research and Engineering, Department of Defense (4).

Assistant Administrator of General Services.

Director, United States Travel Service, Department of Commerce.

Administrator, Wage and Hour and Public Contracts Division, Department of Labor.

Assistant Director (Program Planning, Analysis and Research), Office of Economic Opportunity.

Associate Director (Policy and Plans), United States Information Agency.

Chief Benefits Director, Veterans' Administration.

Commissioner of Labor Statistics, Department of Labor.

Deputy Director, National Security Agency.

Director, Bureau of Land Management, Department of the Interior.

Director, National Park Service, Department of the Interior.

General Counsel of the Veterans' Administration.

National Export Expansion Coordinator, Department of Commerce.

Special Assistant to the Secretary of Defense.

Staff Director, Commission on Civil Rights.

Assistant Secretary for Administration, Department of Transportation.

Director, United States National Museum, Smithsonian Institution.

Director, Smithsonian Astrophysical Observatory, Smithsonian Institution.

Administrator for Economic Development.

Administrator of the Environmental Science Services Administration.

Associate Directors of the Office of Personnel Management (5).

Assistant Federal Highway Administrator.

Deputy Administrator of the National Highway Traffic Safety Administration.

Director, Bureau of Narcotics and Dangerous Drugs, Department of Justice.

Inspector General, Agency for International Development.

Vice Presidents, Overseas Private Investment Corporation (3).

Deputy Administrator, Urban Mass Transportation Administration, Department of Transportation.

General Counsel of the Equal Employment Opportunity Commission.

Director, National Cemetery System, Veterans' Administration.

Executive Director, Advisory Council on Historic Preservation.

Deputy Inspector General, Department of Energy.

Additional officers, Department of Energy (14).

General Counsel, Commodity Futures Trading Commission.

Administrator, Animal and Plant Health Inspection Service, Department of Agriculture.

Administrator, Federal Grain Inspection Service, Department of Agriculture.

Additional officers, Nuclear Regulatory Commission (5).

Executive Director, Commodity Futures Trading Commission.

Assistant Administrator for Coastal Zone Management, National Oceanic and Atmospheric Administration.

Associate Administrator, Office of Juvenile Justice and Delinquency Prevention of the Law Enforcement Assistance Administration.

Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administration.

Assistant Administrators (3), National Oceanic and Atmospheric Administration.

General Counsel, National Oceanic and Atmospheric Administration.

Deputy Inspector General, Department of Health and Human Services.

Inspector General, Department of Commerce.

Members, Federal Labor Relations Authority (2) and its General Counsel.

Inspector General, Department of the Interior.

Director of the Office of Government Ethics.

Inspector General, Community Services Administration.

Inspector General, Environmental Protection Agency.

Inspector General, General Services Administration.

Inspector General, National Aeronautics and Space Administration.

Inspector General, Small Business Administration.

Additional officers, Institute for Scientific and Technological Cooperation (2).

Additional officers, Office of Management and Budget (6).

Associate Deputy Secretary, Department of Transportation.

Chief Scientist, National Oceanic and Atmospheric Administration.

Members, Risk Assessment Board, Department of Health and Human Services (7).

PUBLIC HEALTH SERVICE ACT

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TITLE VII—HEALTH RESEARCH AND TEACHING FACILITIES AND TRAINING OF PROFESSIONAL HEALTH PERSONNEL

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PART F—GRANTS AND CONTRACTS FOR PROGRAMS AND PROJECTS

PROJECT GRANTS FOR ESTABLISHMENT OF DEPARTMENTS OF FAMILY MEDICINE

SECS. 780–788 * * *

GRANTS AND CONTRACTS FOR TRAINING AND CURRICULUM DEVELOPMENT IN OCCUPATIONAL MEDICINE

SEC. 788A. (a)(1) The Secretary may make grants to, and enter into contracts with, schools of medicine and schools of nursing in which occupational medicine or occupational health programs exist on the date of enactment of this section to assist such programs in meeting the costs of carrying out projects to—

(A) provide continuing education for faculty in departments of internal medicine and family medicine or in shcools of nursing in order to enable such faculty to provide instruction in the diagnosis and treatment of occupational diseases;

(B) develop, publish, and disseminate curricula and training materials concerning occupational medicine or health for use in undergraduate medical or nursing training; or

(C) establish, for residents in graduate medical education programs in internal medicine, family medicine, or other specialties with a primary care focus, or in graduate nursing programs in schools of nursing, training programs in occupational medicine or health consisting of clinical training, for periods of between 1 and 4 months, in settings such as medical facilities, union offices, and industrial worksites.

(2) In making grants and entering into contracts under this subsection, the Secretary shall give preference to applicants which demonstrate—

(A) the ability to recruit a significant number of participants to participate in the project to be carried out under the grant or contract (in the case of a project described in subparagraph (A) or (C) of paragraph (1); and

(B) expertise and experience in the provision of continuing education in occupational medicine or health (in the case of a project described in subparagraph (A) of such paragraph) or the provision of residency training in occupational medicine or health (in the case of a project described in subparagraph (C) of such paragraph).

(b)(1) The Secretary may make grants to, and enter into contracts with, schools of medicine and schools of nursing in which, on the date of enactment of this section, there do not exist training programs in occupational medicine or health. The purpose of grants and contracts under this subsection is to provide support for projects

to provide training in occupational medicine or health for faculty who are certified in internal medicine or family medicine by the appropriate national medical specialty board or faculty who have similar qualifications in professional nursing.

(2) Each project for which a grant or contract is made under this subsection shall—

(A) be based in a graduate medical education program in internal medicine or family medicine or in graduate programs in a school of nursing;

(B) have an arrangement with an accredited training program in occupational medicine or health for the provision of training in occupational medicine or health to the faculty selected by the recipient of the grant or contract under this subsection; and

(C) have a plan for the use of the faculty receiving training with a grant or contract under this section to provide education and training in occupational medicine or health to other individuals.

(c) The Secretary shall, during the period October 1, 1987, through September 30, 1990, make grants and contracts to not less than 10 schools of medicine or schools of nursing under subsections (a) and (b).

(d) Amounts described in section 14(b)(2) of the High Risk Occupational Disease Notification and Prevention Act of 1987 shall be available to carry out this section.

(e) For the purpose of this section—

(1) the term "graduate medical education program" has the same meaning as in section 788(e)(4)(A); and

(2) the term "school of nursing" has the same meaning as in section 853(2).

XII. APPENDIX

MEDICAL SCREENING ESTIMATES FOR WORKER NOTIFICATION

Substances	Estimated number of workers potentially exposed 1957–87 [1]	Examples of types of industries or occupations	Diseases of concern	Risk relative to general population [2]	Range of medical screening cost (minimum-maximum) for procedures that might be recommended[3] [4]	Rating for effectiveness of medical screening (0–5) [5]	Other Interventions
OSHA STANDARDS							
Asbestos	4,000,000 [6]	auto service stations, construction, insulators, asbestos product manufacturing	asbestosis lung cancer	294 136	$105–$150 Annual physical examination, with emphasis on the pulmonary, cardiovascular, and gastrointestinal systems; chest x-ray; lung function tests to include FVC and FEV (1 sec.); sputum cytology.	3 3	Risk factor modification (cigarettes); counseling for early symptoms.
Coal tar pitch volatiles.	78,764 [7]	roofers, metal mfgr., road construction, steel mills	lung cancer skin cancer	159 400	$55–$95 Annual physical examinations with emphasis on the skin, mucous membranes of the oral cavity, respiratory tract, liver, and kidneys; 14″×17″ chest x-ray (PA and lateral); FVC and FEV (1.0 sec); sputum cytology.	3 3	Risk factor modification (sunlight, cigarettes); counseling for early symptoms.
4-nitrobiphenyl	([8])	chemical production, research workers	bladder cancer cancer	([9])	$155–$200 Annual physical examination with emphasis on the urinary tract; personal history of the employee with family and occupational background, including genetic and environmental factors; urinalysis; cystoscopy.	5	Risk factor modification (cigarettes); counseling for early symptoms.
Alpha-naphthylamine.	2,132 [7]	clinical labs, dye makers	bladder cancer	([9])	$155–$200 Annual physical examination with emphasis on urinary tract; a personal history of the employee with family and occupational background, including genetic and environmental factors; urinalysis; cystoscopy.	5	Risk factor modification (cigarettes); counseling for early symptoms.

Methyl chloromethyl ether.	(8)		lung cancer	(9)	$35–$50	3	Risk factor modification (cigarettes); counseling for early symptoms.
					Annual physical examination with a personal history of the employee, family and occupational background, including genetic and environmental factors; 14" x 17" chest x-ray.		
3,3'-dichloro-benzidine.	879 [7]	pigment makers	bladder cancer	(9)	$155–$200	5	Risk factor modification (cigarettes); counseling for early symptoms.
					Annual physical examination with emphasis on urinary tract; personal history of the employee, family and occupational background, including genetic and environmental factors; urinalysis; cystoscopy.		
Bischloromethyl ether.	11,400 [10]	chemical mfgr., lab techs., hospitals, ion exchange resin workers	lung cancer	(9)	$35–$50	3	Risk factor modification (cigarettes); counseling for early symptoms.
					Annual physical examination with a personal history of the employee, family and occupational background, including genetic and environmental factors; chest x-ray.		
Beta-naphthylamine...	5,816 [10]	textile and paper dye mfgr., leather dying, research workers	bladder cancer	286	$155–$200	5	Risk factor modification (cigarettes); counseling for early symptoms.
					Annual physical examination with emphasis on urinary tract; a personal history of the employee, family and occupational background, including genetic and environmental factors; urinalysis; cystoscopy.		
Benzidine.....	1,650 [10]	medical labs, ordinance mfgr., chemical dyes, rubber workers	bladder cancer	(9)	$55–$200	5	Risk factor modification (cigarettes); counseling for early symptoms.
					Annual physical examination with emphasis on urinary tract; a personal history of the employee, family and occupational background, including genetic and environmental factors; urinalysis; cystoscopy.		
4-aminodiphenyl.....	(8)		bladder cancer	(9)	$155–$200	5	Risk factor modification (cigarettes); counseling for early symptoms.
					Annual physical examination with emphasis on urinary tract; a personal history of the employee, family and occupational background, including genetic and environmental factors; urinalysis; cystoscopy.		
Ethyleneimine.....	1,712 [7]	fabricated metals, transport equip., paper workers	lung cancer	(9)	$35–$50	3	Risk factor modification (cigarettes); counseling for early symptoms.
					Annual physical examination with emphasis on the eyes, respiratory tract, kidneys, and blood; 14" x 17" chest x-ray; FVC and FEV (1 sec.).		

MEDICAL SCREENING ESTIMATES FOR WORKER NOTIFICATION—Continued

Substances	Estimated number of workers potentially exposed 1957–87 [1]	Examples of types of industries or occupations	Diseases of concern	Risk relative to general population [2]	Range of medical screening cost (minimum-maximum) for procedures that might be recommended [3] [4]	Rating for effectiveness of medical screening (0–5) [5]	Other Interventions
Beta-propiolactone	38 [7]	agricultural, technicians	skin cancer	([9])	$30 Annual physical examination with emphasis on the skin with a personal history of the employee, family and occupational background, including genetic and environmental factors.	5	Risk factor modification (sun light); counseling for early symptoms.
2-acetylamino-fluorene.	896 [7]	research workers	bladder cancer	([9])	$155–$200 Annual physical examination with emphasis on urinary tract; a personal history of the employee, family and occupational background, including genetic and environmental *factors, urinalysis, cystoscopy.*	5	Risk factor modification (cigarettes); counseling for *early symptoms.*
4-dimethyaminoazo-benzene.	1,453 [7]	clinical labs	bladder cancer	([9])	$155–200 Annual physical examination with emphasis on urinary tract; a personal history of the employee, family and occupational background, including genetic and environmental factors; urinalysis; cystoscopy.	5	Risk factor modification (cigarettes); counseling for early symptoms.
N-nitrosodimeth-ylamine.	7,815 [10]	R&D labs, Solvent workers	liver cancer	([10])	$50 Annual physical examination with a personal history of the employee, family and occupational background, including genetic and environmental factors.	1	Risk factor modification (alcohol); counseling for early symptoms.
Inorganic arsenic	660,000 [6]	primary metal industries, elect. equip. mfgr.	skin cancer lung cancer	([9])	$125–$175 Annual physical examination, with emphasis on the skin, respiratory system, and blood; complete blood count; 14" x 17" chest x-ray, with special attention to parenchymal and hilar changes; FVC and FEV (1 sec.).	5 3	Risk factor modification (sun light, cigarettes) counseling for early symptoms.
Lead	800,000 (includes all lead compounds) [6]	battery plants, paint makers, solderers, pesticide workers	neurologic, renal disease	329	$55–$95 Annual physical examination with emphasis on the nervous system, gastrointestinal tract, blood, and kidneys; complete blood cell count; urinalysis; and blood lead.	3 3	Counseling about early symptoms.

Coke oven emissions.	59,000 [10]	steel mills	lung cancer kidney cancer	410	$85–$185 Preplacement work history, smoking history and record of the presence and degree of respiratory symptoms, such as breathlessness, cough, sputum production, and wheezing. A 14" x 17" PA chest x-ray and International Labour Office UICC/Cincinnati (ILO/UC) rating. FVC and FEV (1 sec.), weight, skin examination, urinalysis, sputum cytology, and urinary cytology. This examination is performed semiannually on all workers 45 years of age or older with five or more years or exposure. Otherwise, it is performed annually (but without sputum cytology and urinary cytology.	3 3	Risk factor modification (cigarettes); counseling for early symptoms.
Cotton dust	559,700 [6]	cotton workers	byssinosis	([9])	$75–$150 Annual physical examination with emphasis on the respiratory system; standard questionnaire (see Appendix IV of NIOSH Criteria Document for Cotton Dust); FVC and FEV (1 sec.).	3	Risk factor modification (cigarettes); counseling for early symptoms.
1,2-dibromo-3-chloro-propane.	3,231 [10]	pesticide manufacturers, formulators applicators	sterility (males)	([9 11])	$25-$80 Annual physical examination with emphasis on the genitourinary tract, including palpation of the testes; semen analysis complete urinalysis; and complete blood count.	4	Counseling about extent of effect.
Acrylonitrile	55,698 [7]	auto service stations, chemical mfgr., rubber & plastic products, paint workers	lung cancer colon cancer	121	$55–$95 Annual physical examination with emphasis on the cardiovascular system.	3 4	Risk factor modification (diet, cigarettes); counseling for early symptoms.
Ethylene oxide	107,450 [6]	hospitals, food processing, chemical industry	leukemia	114	$35–$150 Annual physical examination with emphasis on the eyes, blood, respiratory tract, liver, kidneys, and skin; complete blood count; 14" x 17" chest x-ray FVC and FEV (1 sec.).	0	Counseling about extent of risk.

MEDICAL SCREENING ESTIMATES FOR WORKER NOTIFICATION—Continued

Substances	Estimated number of workers potentially exposed 1957–87 [1]	Examples of types of industries or occupations	Diseases of concern	Risk relative to general population [2]	Range of medical screening cost (minimum-maximum) for procedures that might be recommended [3] [4]	Rating for effectiveness of medical screening (0–5) [5]	Other Interventions
Vinyl chloride	29,936 [7]	chemical workers, rubber workers	liver cancer lung cancer brain cancer	1,555	$75–$150 A complete history and physical examination including examination of the liver, spleen, kidneys, skin, connective tissues, and the pulmonary system. The medical history shall include the following topics: alcohol intake, history of hepatitis, history of blood transfusions, history of hospitalizations, work history, and past exposure to potential hepatotoxic agents, including drugs and chemicals. Liver function tests: total bilirubin; alkaline phosphatase; serum glutamic oxalacetic transaminase (SGOT); serum glutamic pyruvic transaminase (SGPT); and gamma alutamyl transpeptidase. The above medical examinations are to be repeated every six months for each employee who has been employed in vinyl chloride or polyvinyl chloride manufacturing for ten years or longer and annually for all other employees. When tests in this section show abnormalities, the tests should be repeated as soon as practicable, preferably within three to four weeks. If tests remain abnormal, consideration should be given to withdrawal of the employee from contact with vinyl chloride, while a more comprehensive examination is made. The following additional tests may be useful: urinalysis: a determination of urine albumin and a test for the presence of blood or exfoliated abnormal cells in the urine; FVC and FEV (1 sec.); 14" x 17" chest x-ray; additional serum tests. lactic acid dehydrogenase isoenzyme, protein determination, and protein electrophoresis; hepatitis B antigen, and liver scanning for a more comprehensive examination on repeated abnormal serum tests.	1 3 0	Risk factor modification (alcohol, cigarettes); counseling for early symptoms.

ADDITIONAL SUBSTANCES FROM 1977 NIOSH POLICY DOCUMENT						
Carbon Monoxide, Products of Combustion.	1,997,559 [7]	tunnels, blast furnaces, chemical, industry	Ischemic cardiovascular disease	134	$35–$100 ..... 4 Annual physical examination with emphasis on the central nervous system and cardiovascular system. A baseline determination of carboxyhemoglobin also has been suggested.	Risk factor modification (cigarettes, diet, exercise).
Benzene	2,000,000 [5]	chemical manuf., chemists, fuel distribution, rubber makers	leukemia aplastic anemia	560	$35–$50 ..... 0 Preplacement and quarterly examinations, including a history which includes past work exposures to benzene or any other hematologic toxins, a family history of hematological neoplasms, a history of blood dyscrasias inciuding genetically related hemoglobin alterations, bleeding abnormalities, abnormal function of formed blood elements, a history of renal or liver dysfunction, a history of drugs routinely taken, alcoholic intake and systemic infections; complete blood count including a differential white blood cells count. 0	
Beryllium	30,000 [6]	metal production, machinery production	lung cancer berylliosis	187	$35–$50 ..... 3 Annual periodic physical examinations with emphasis on the respiratory tract, liver, kidneys, and skin; pulmonary function tests, such as FVC and FEV (1 sec.) 14" x 17" chest x-ray. 3	Risk factor modification (cigarettes), counseling for early symptoms.
Cadmium and Compound.	1,500,000 [6]	alloy makers, battery makers, pesticide workers, smelter workers	lung cancer renal disease	238	$35–$159 ..... 3 Annual physical examination with emphasis on examination of the respiratory system and kidneys; urinalysis with quantitative analysis of protein. Pulmonary function testing, such as FVC, FEV (1 sec.) and 14" x 17" chest x-ray.	Risk factor modification (cigarettes), counseling for early symptoms.
Chloroprene	43,712 [7]	artificial rubber makers	lung cancer	145	$35–$159 ..... 3 Annual physical examination with emphasis on the respiratory system and the skin; 14" x 17" chest x-ray.	Risk factor modification (cigarettes), counseling for early symptoms.

MEDICAL SCREENING ESTIMATES FOR WORKER NOTIFICATION—Continued

Substances	Estimated number of workers potentially exposed 1957–87 [1]	Examples of types of industries or occupations	Diseases of concern	Risk relative to general population [2]	Range of medical screening cost (minimum-maximum) for procedures that might be recommended [3,4]	Rating for effectiveness of medical screening (0–5) [5]	Other Interventions
Talc	527,523 [7]	miners, rubber making	respiratory disease	125	$35–$151 Annual physical examination with emphasis on the respiratory system and cardiovascular system; 14" x 17" chest x-ray; FVC and FEV (1 sec.).	3	Risk factor modification (cigarettes); counseling for early symptoms.
Fibrous Glass	200,000 [8]	construction, insulation workers, product manufacturing	respiratory disease	125	$35 There are no specific clinical, x-ray, or pulmonary function test changes that are reported to be characteristic of fibrous glass exposure. Surveillance should be conducted because of the potential chronic health effects.	3	Risk factor modification (cigarettes), counseling for early symptoms.
Methyl Butyl Ketone.	220,000 [8]	painting operations, chemical manufacturing	peripheral neuropathy	([9,11])	$35–$50 Annual physical examination with emphasis on the nervous system, respiratory system, and skin.	2	Counseling for early symptoms.
Polychlorinated Biphenyls.	12,000 [8]	Maintenance of electronic equipment (transformer, capacitors)	chloracne liver injury	([11])	$35–$50 Annual physical examination with emphasis on the liver and skin; liver function tests.	2	Counseling for early symptoms.
Radon Daughters	23,000 [10]	miners	lung cancer	449	$150–$300 Pre-employment medical examination must be mandatory in all occupations involving work with radioactive substances, and persons with diseases and injuries constituting contraindications for such work must be excluded. Particular attention must be paid to the condition of the respiratory tract and the functional capacity of organs and systems at risk (kidneys) including detailed laboratory analyses of blood and urine. Similar periodical check-ups must be made at least once every 6 months. For monitoring exposure, recourse to special methods of analysis is necessary. The determination of radon and thoron in the exhaled air of exposed persons provides a good indication of exposure; in assessing radon exposure, the determination of ^{210}Po and ^{210}Pb levels in the urine can also be of great value.	3	Risk factor modification (cigarettes), counseling for early symptoms.

Silica, Silica Flour	93,655 for Silica Flour; 1,200,000 for free silica (omits 2.5 million in agriculture, 0.6 million in chemicals and allied industries, and 0.6 million in heavy construction) [9]	stone cutting foundries, sand blasters, miners	Silicosis Respiratory disease	([9] [11])	$35–$50 ..... 3 Annual physical examination with emphasis on the respiratory and cardiovascular systems; 14" x 17" chest x-ray; FVC and FEV (1 sec.). 3	Risk factor modification (cagarettes), counseling for early symptoms.
CURRENTLY ON OSHA DOCKET (with index epidemiologic studies)						
Formaldehyde and Formalin.	1.6 million [6]	morticians, textile workers, laboratory workers, chemical production	cancer (buccal cavity)	343	$35–$50 ..... 3 Annual physical examination with emphasis on the respiratory tract and skin; 14" x 17" chest x-ray; FVC and FEV (1 sec.).	Risk factor modification (cigarettes), counseling for early symptoms.

[1] These numbers include both current and former workers.
[2] A value of 100 would indicate that the disease occurs as frequently in the worker group as in the general population. Therefore, for example 294 means the disease occurs 2.94 times more frequently in this work group than in the general population.
[3] All workers would not need screening or the same frequency of screening. Therefore, the cost of screening will not apply to all workers. A graded response will need to be applied. This will be based on such factors as age, length of employment, job category, etc. The cost estimates do not include a fee of $50 for physician time to take a medical history and counsel patients, etc.
[4] Recommendations for medical screening are for currently exposed workers as presented in Proctor N, Hughes J: Chemical Hazards in the Workplace, Philadelphia, J.B., Lippincott Co, 1978. These recommendations sometimes include diagnostic procedures and are not specifically screening.
[5] Rating: 0–5, with 5 the best. This is a subjective rating. The effectiveness of medical screening techniques is dependent on technological developments and should be evaluated periodically by a panel of experts.
[6] The estimated number is derived from documentation included in the OSHA Standard, NIOSH Criteria Documents, or NIOSH Current Intelligence Bulletins.
[7] The estimated number is derived from the National Occupational Hazard Survey (NOHS) of 1972–1974, or provisional estimates from the National Occupational Exposure Survey (NOES) of 1982–83.
[8] In some cases, no information was available on the number of workers since the substance was not an industrial product but rather, a contaminant, or because the substance was not widely used in industry.
[9] Blank indicates that no study of an exposed cohort was found in time for preparation of this report.
[10] The estimate is based on the number of workers identified in the NIOSH cohort mortality studies of the agent.
[11] Note, this information is not on mortality, but rather deals with morbidity effects.

Note: In general, it should be noted that the estimated number of workers potentially exposed are based on the best available information and should not be considered actual values. These estimates could, of course, vary using different assumptions.